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The Role of Venture Capital in Innovation Systems

A Case Study Comparing the Possible Risks and Rewards for Volvo Group Venture Capital Between Initiating Investments in China, India, Japan, Singapore, South Korea, and Taiwan

Master's Thesis in Management and Economics of Innovation

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Abstract

Different countries promote innovation and create competitiveness in different ways. A common way to study this is with innovation systems, which describe the creation and spread of information and technology in a network of actors such as companies and the government. A hypothesis is that the state of the venture capital (VC) market should be of importance to innovation systems as VC promotes entrepreneurship which enables innovation. To examine this, a case study of the corporate investor Volvo Group Venture Capital (VGVC), where through a study of select venture capital markets in Asia: China, India, Japan, Singapore, South Korea and Taiwan, the most suitable country for a western CVC in the automotive industry to initiate investments in was selected. To conduct the case study, a framework was constructed based on a literature review and interviews with industry experts with five themes framing the data collection. These were business climate and technological trajectory, startup landscape, VC landscape, fund collaboration opportunities and ease of doing an exit. In phase 1 of the result, China, India and Singapore were deemed more favourable for VGVC based on their startups and their venture capital industry. In phase 2, these three countries were further studied on all five themes, and Singapore was judged to be the most favourable country of the six countries for a western CVC to initiate investments in. The motive for this was the stable, foreign friendly and VC promoting environment together with a wide, active startup network and technology encouraging government in Singapore. To conclude, a good first step for a western CVC in the automotive industry would be to invest in an international fund in Singapore due to the low risk with stable institutions and additional service elements. No conclusion can be drawn regarding the importance of institutions for VC markets, however in case innovation is largely driven by startups, VC should be an important factor in innovation systems.

Keywords: national innovation systems, institutions, venture capital, corporate venture capital, funds, automotive industry, Asia.

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Terminology

Innovation system is a theory describing the creation and diffusion of knowledge and innovation in a network of actors, such as the government and companies.

Institutions can be said to form a society, or an economy, and consists of informal institutions such as norms and cultures, and formal institutions such as laws and regulations.

Venture capital is a type of funding given to startups in the early stages of business development.

VC company is a company that invests in startups to help the startup grow, and then “exits” the investment to get the investment with profit back.

CVC company is a part of a larger corporation that functions like a VC company, but with the additional focus that the investment should contribute strategically to the main company.

Venture capital fund is a structure set up by a VC to collect investments from limited partners to invest in portfolio companies.

Investment round is the process of raising capital for a fund.

Limited partner is an investor who places money in a VC fund. This could for example be a wealthy individual, a company or a foundation.

General partner, also called fund manager, is the investment professional that manages the fund.

Portfolio company is a company, such as a startup, that a fund or a VC/CVC invests in.

Exit is the mechanism by which an investor liquidates their investment and gets the investment back, ideally with profit.

IPO is a type of exit where the startup is listed on a stock exchange, thus liquidating the investment.

M&A is a type of exit where the startup is sold to, or merged with another company, thus liquidating the investment.

SPAC is a type of exit where a startup is listed on a stock exchange through being purchased by a newly formed empty company that is already listed on the stock exchange.

Unicorn is a privately owned startup that is valued at more than 1 billion USD.

1. Introduction

This report is made in a collaboration between Volvo Group Venture Capital and Chalmers University of Technology in Gothenburg. The report will, through a case study of how institutions impact selected venture capital markets in Asia, explore venture capital as a possible missing factor in studies of national competitiveness and innovation systems. The case study aims to compare and select the most suitable venture capital market of China, India, Japan, Singapore, South Korea and Taiwan for Volvo Group Venture Capital's potential first investment in Asia. To judge the suitability of these venture capital markets, a framework with five themes and several underlying criteria was constructed through interview and secondary data as well as literature research.

The report is structured as follows. First, the possible connection between venture capital and innovation systems is explored through a literature review. Secondly, the specifics and the workings of a venture capital market are explained. Then, the result of the case study will be presented in two parts. The first part, phase 1, where three countries are selected, China, India and Singapore, out of the six initial countries studied based on two themes in the framework. Then, the second part, phase 2, where China, India and Singapore are further studied by adding three themes to the framework. In the analysis, the results from both phases as well as the selection and implications of selecting Singapore as the most suitable venture capital market for a western CVC in the automotive industry are discussed. Lastly in the conclusion, a practical approach for a western CVC in the automotive industry to start investing in Asia is presented, together with the study's contribution to the theoretical hypothesis that the framework for studying competitiveness, innovation systems, overlooks the factor of venture capital.

1.1 Background

National competitiveness has been a subject for research since the 1980s (Ju & Sohn, 2014). There are many ways to view national competitiveness. Some define national competitiveness as the collective global market share of a country's industries paired with the profitability of said industries (Ju & Sohn, 2014). Many scholars agree it is a function of the industries' productivity (Adamkiewicz, 2019). Others claim it is not only a matter of the industries' performances but also the interaction with the national macroenvironment (Ju & Sohn, 2014). A major contributor to national competitiveness is innovation and new technology (Niosi, 1991).

Every year, the Institute of Management Development (IMD) releases a list that ranks nations after national competitiveness relative to each other, judged by four main factors: economic performance, infrastructure and business and government efficiency. While the IMD's ranking system provides a base for comparing nations to each other and benchmarks, as well as explores trends, it does not further investigate the factors behind national competitiveness and their

interactions with each other (Ju & Sohn, 2014). In 1990, Michael E Porter developed the Diamond Model, which despite not being his most famous framework, has become a well-known framework to examine the factors behind national competitiveness. The Diamond Model assesses the competitiveness of industries in a country or another restricted location and can be used to understand how countries can gain competitive advantage (Porter, 1990).

One industry that Michael Porter studied using the Diamond Model is the automotive industry. In particular, he analysed the differences between the American and the Japanese automotive industries, and the factors behind the success of the Japanese one; better innovation capabilities stemming from more specific demand and tougher competition (Sölvell, 2015). The automotive industry is a major contributor to the global economy. It is an industry in change, with many mergers and acquisitions happening amongst suppliers, changing the basis for the industry, according to Heneric et al. (2005). The demand side is also changing, with a shift towards emerging economies such as the Asian region. The automotive industry can be divided into cars, trucks and buses. According to Heneric et al., all three segments are dominated by the three regions Europe, Asia-Oceania and America. Asia-Oceania accounts for 30 % of the truck production volume worldwide, while Europe accounts for 14 %. Regarding bus production volumes, Asia-Oceania accounts for over 90 %, while the corresponding European number is below 4 %, with Sweden being the foremost.

In addition to the industry producing value itself, forwards and backwards linkages to customers and suppliers also add considerable value. The automotive industry is also a driver of innovation and new technologies, according to EY (2017), and it also is a customer to many high-tech industries, thus creating demand for new technologies. In the automotive industry, the suppliers account for a significant part of the production process, and the automotive suppliers' industry is currently facing opportunities for growth for example due to an increase in the value of car equipment such as electronics innovations. According to EY, there has been an increase in potentially disrupting new entrants to the automotive market. The mobility ecosystem is changing, and the pervasive digitalisation across the value chain creates new opportunities.

One reason why Asia is such a dominant region in the automotive industry could be due to its economic size and growth. With its large and quickly growing economy, Asia is a region of significance for most industries. For the last thirty years, developing Asian economies such as China and India have played a significant role in the growth of the global economy (Sun et al., 2020). Developing economies, or emerging markets, are characterised by strong economic growth and significant change in institutions. China, India, Taiwan and South Korea are classified as emerging markets, and Japan and Singapore are classified as developed markets (MSCI, 2020).

One factor playing an important role in economic growth is entrepreneurship (Yu et al., 2020), and a condition for high growth entrepreneurship is the presence of venture capital as well as stable institutions. Previous research suggests that institutions are necessary for market

development. Not only are formal institutions, such as legal systems and regulations, a requirement for a venture capital market, but informal institutions are a prerequisite for high-value entrepreneurship, which in turn is a necessity for a venture capital market (Bustamante et al., 2021).

In the last decade, Asia has become a major hub for venture capital. China alone has been attracting more funding than the US in recent years with India and the Asia Pacific region both individually attracting more funding than Europe (McKinsey & Company, 2020). This is a significant change, and a lot of western venture capitalists are now turning their attention towards Asia. More than just being a growing centre for venture funding, Asia has also evolved towards being a technology leader in several fields which has brought forward a large and varied network of startups and early-stage businesses. Many factors point towards it becoming increasingly important to have a presence in Asia as a technology investor.

1.2 Aim

A question arising from studying national competitiveness and innovation systems is the seeming lack of one important factor. The factor in question being venture capital, and in large the whole venture capital industry. Venture capital has a studied positive effect on entrepreneurship and innovation and continuous innovation is the driver for competitiveness. For this reason, there is a theoretical direct link between the state of the venture capital market and national competitiveness. Research has shown that the state of institutions in the country will affect the venture capital market. Naturally, institutions are something that changes between countries, both formal institutions and informal institutions.

But where informal institutions such as culture and norms usually are slow to change by nature and remain quite stable in countries, formal institutions do change and especially so in countries in changing states. Countries in changing states are for example countries with rapidly expanding economies such as emerging markets. Many of these emerging markets can be found in Asia, for example, China and India. For this reason, a study of the venture capital market in Asia is partly like a snapshot in time. A lot is happening with the formal institutions and the macro environment can change a lot in quite a short time. This is further true because of the relative newness of the Asian venture capital market, which means it is a growing market in development. From this background, the issue of investigation is written below.

How significant a factor is the state of the domestic venture capital markets for innovation systems?

1.3 Context for case study

Corporate ventures are a significant and steady part of the Asian venture capital ecosystem (KPMG, 2020a). This thesis is done in collaboration with Volvo Group Venture Capital, hereafter called VGVC, which is a global automotive company Volvo Group's venture arm.

Volvo Group is a multinational company in the transport and infrastructure industry. Founded in Sweden in 1927, the company now has over 100 000 employees and is present in 190 countries all over the world. The company manufactures trucks, buses, boat engines and construction equipment, and also offers service solutions in connection to these products. Currently, most of Volvo Group's revenue comes from their product offerings, but recently the focus on service offering has increased.

Volvo Group Venture Capital, VGVC, is Volvo Group's corporate venture capital branch. The function of VGVC is to identify and collaborate with startups to develop and support new business areas and opportunities for Volvo Group as well as increase profitability for existing customers (Volvo Group, 2021). Their areas in which they invest in are therefore the same as Volvo Group's businesses: automotive mobility and transportation technologies. More precisely, VGVC has constructed three main areas of interest that are as follows: logistics services and transport solutions, electric mobility and infrastructure and site solutions. Logistics services and transport solutions include for example services to increase transport efficiency, and tools to orchestrate the transportation network, with services for real-time navigation and supply chain efficiency for instance. Electric mobility and infrastructure refer to the whole supply chain for electric vehicles, for instance charging stations and battery efficiency. Lastly, site solutions include services for instance for orchestrating site efficiency and safety at mines, port with services including robotics and remote control for example.

Currently, VGVC is only investing in Europe and the US, but they are considering expanding to Asia. VGVC wants to learn how to create value for their stakeholders by starting to invest in Asia. Therefore, the case study aims to explore how a western corporate venture capital in the industrial mobility and transportation sector should go about starting investments in Asia. The six initial countries of China, India, Japan, Singapore, South Korea and Taiwan were selected in collaboration with VGVC to study. The study will, through constructing a framework, examine and compare these six countries to select the most suitable country for a western CVC to start investing in, as well as practical ways to make investments and what implications these choices will have on risk and reward for the CVC.

1.4 Research questions

To meet the aim of this study, the following research questions will be answered.

- What factors should be considered when examining the state of a venture capital market?
 - What does formal and informal institutions' role for a healthy venture capital market look like?
- Which of China, India, Japan, Singapore, South Korea and Taiwan is the most suitable country for a western CVC, such as Volvo Group Venture Capital, to start investing in Asia and why?

1.5 Delimitations

This study is limited to a single organisational case study at a corporate venture capital company based in Sweden, Volvo Group Venture Capital, hence the result will be delimited to their interest areas: logistics services and transport solutions, electric mobility and infrastructure and site solutions. Further, only factors that have been deemed to be most critical when investing in a foreign venture capital market have been investigated, there might be other less critical factors that may affect the state of venture capital markets and their role in innovations systems. Furthermore, the case study only focuses on six Asian countries, China, India, Japan, Singapore, South Korea, and Taiwan, which is later narrowed down to three countries to be able to do an in-depth analysis.

2. Theoretical framework

In an increasingly globalized world, the ability to innovate is essential for a nation to achieve and sustain competitiveness. National competitiveness and the role of the nation have gained importance, meanwhile, innovation has shifted to largely entail creating and assimilating knowledge (Porter, 1998). There are social systems in place nationally which are centred around learning, and these systems are important for innovation (Lundvall, 2010).

2.1 Innovation systems and national innovation systems

Innovation is a function of entrepreneurship, and essentially means a creation that directly or indirectly creates wealth. Entrepreneurship can be carried out by all levels of the organisation, from the sole entrepreneur to a large company, according to Drucker (1985). Over time, innovation has evolved from previously being restricted to within the boundaries of the company to now rather being co-created between multiple actors. This form of co-innovation is called open innovation. Open innovation is when companies are using external technology to contribute to internal innovation, as well as when companies are sharing technology so that other actors in the network can use it to innovate. Open innovation is a way for companies to fully utilize external as well as internal knowledge for innovation. A company can practise open innovation in several ways, including licensing, joint projects and alliances, ventures and acquisitions as well as open-source development (Wang et al., 2011).

The possibilities for companies to practise open innovation is largely dependent on the external business environment, consisting of for example a skilled workforce, financial resources as well as strong institutions regulating laws and IP. These factors and more are tightly connected to the national innovation system (Wang et al., 2011). The national innovation system is a subcategory of the larger theory of innovation systems. The innovation system is a network where information and knowledge are exchanged between the agents, which in turn provides the infrastructure for innovation and development. Innovation systems can be studied at different levels of abstraction, such as regional, national and international, where national is the most commonly used (OECD, 1997). This literature review will further explore two common ways to analyse innovation systems and national innovation systems in particular which is cluster analysis and the Porter Diamond (OECD, 1997; Afzal et al., 2019).

Open innovation is enabled by strong linkages in the national innovation system in general and in specific a stronger connection between public and private entities. Wang et al. (2011) argue that it is also true that open innovation strengthens national innovation systems. As open innovation is dependent on out and inwards flows of information, it is also dependent on intellectual property regulations. A well-functioning system for intellectual property rights will facilitate these flows of information and is one of the most important factors empowering open innovation, according to Wang et al.

National innovation system as a subcategory of innovation systems can be defined as the network made up of agents in both the private and public sector, where innovation activities are carried out, affecting the country's innovative performance (Capron & Meeusen, 2000; OECD, 1997; Wang et al., 2011). These agents include companies, academia and research institutes and the government. Innovation activities refer to the initiation, the adjustment and the diffusion of the innovation between actors. The term innovation in national innovation systems is broadly defined including organisational, process and product innovations. The focus in this systematic approach is on the regional differences, opposite to all nations having the same conditions (Capron & Meeusen, 2000).

Worldwide, globalisation increases the number of companies that collaborate and start businesses across borders. This trend is especially noted in the high-tech industry and with related innovation. Meanwhile, local innovation has also risen in importance, something that Lundvall (2010) argue to be mutually reinforcing with globalisation, that globalisation springs from local innovation. National systems of innovation still have a very important role in innovation, despite the growing trend of globalisation. According to Lundvall, innovation and knowledge creation call for very close collaboration between the actors in a network. If the parts share the same overall institutions such as norms and culture, which is normally the case if they originate from the same nation, the innovation process will be facilitated.

Rather than being confined by national borders, the national systems of innovation are open, and information and knowledge do cross borders. It is important to consider the processes of national innovation systems when setting and forming policies to induce innovation. The exploitation of technology development will look different in different countries, and it is, therefore, important to stress learning between national innovation systems rather than directly apply one country's system to another (Lundvall, 2010). To judge and compare countries' innovation capabilities and thus their national innovation systems, multiple parameters can be considered such as R&D spending related to GDP and number of patents (Lundvall, 2010; OECD, 1997).

2.2 Clusters

A concept closely related to the national innovation system in the cluster, a location with multiple interconnected companies and other institutions within the same industry or field (Ketels, 2005; Porter, 1998). A cluster is a type of economic agglomeration where both technologically related activities and innovation happens (Sölvell, 2008). Economic agglomerations spring from economies of scale and scope when links are established in a geographic region between companies, institutions and infrastructure. This decreases the transaction costs in this region and industry, why performance is hypothesised to increase for companies' part of this agglomeration (Sölvell, 2008). For companies to keep a competitive advantage, they need to continuously innovate, something that is dependent on the surrounding business environment. It has been established that competitive advantage along with innovation

has a strong connection with geographic regions (Porter, 1998) and clusters are important for innovation as they provide a suitable environment for the activity (Sölvell, 2008).

Extending the cluster-innovation connection, the number of new businesses is also increased in a cluster (Porter, 1998). The reason for this is a lower barrier of entry connected to the perceived lower risk level in a cluster, according to Porter. Resources such as skilled workforce, materials and input are available as well as an often important local market together with industrial relationships all of which facilitates the start of new businesses. A growing cluster will gain more influence with the government and increasingly catch the interest of talents such as entrepreneurs. It might even be easier to receive investments if investors are already acquainted with the cluster.

2.3 The Porter Diamond

The Porter Diamond was constructed by Michael E Porter (1990) to examine national competitiveness through the business environment in a certain region. In addition to this, the Porter Diamond can be used to study national innovation systems (Afzal et al., 2019) as it builds on the literature for innovation systems. National competitiveness is achieved through acts of innovation. Innovation does not always have to be disruptive but could be incremental and often include recombining already existing knowledge. This information is often acquired through openness and contact with the external environment. An advantage is reached when one agent acts first, and other actors are lagging in replicating the act. Almost any advantage can erode and needs to be strengthened with continuous innovation effort.

The framework Porter Diamond consists of four factors, namely “factor conditions”, “demand conditions”, “related and supporting industries” and “firm, strategy and rivalry”. The overall meaning of these four factors is also discussed in the national innovation systems theory (Afzal et al., 2019) Factor conditions are the inherited or crafted factors that enable and support production. Factor conditions include, according to Porter (1990) natural resources, a skilled workforce and infrastructure for example, but the most valuable are those highly specialized towards the industry and which take consistent investments to develop making them scarce. Demand conditions mean the demand for the industry’s product in the home region. Porter argues that this demand from home has shown to hold particular power over a company, and when the demand is early and advanced pressuring innovation the company has a competitive advantage.

Furthermore, the presence of competitive related and supporting industries increases the competitiveness for the industry in question (Porter, 1990). Close collaboration with supporting industries enables innovation through an instant flow of information. The last factor firm strategy, structure and rivalry describe the different optimal business forms in different regions. Norms and context differ between regions in how the best type of organization and the most successful kind of strategy look like, be it smaller flexible organizations or larger hierarchical companies. According to Porter, the most important factor is the domestic rivalry because of

its effect on the other three factors, stimulating innovation. These factors create a self-reinforcing system, the state of one will be affected by the others, but weakness in a single factor can also constrict industry competitiveness.

2.4 Institutional theory

There have been several criticisms of the Porter Diamond published. One major criticism is that the model does not take into consideration many institutional factors, according to Cho et al. (2016). Informal institutions such as culture and human factors are largely neglected. It has also been suggested that the role of formal institutions, such as the government is downplayed, and suggestions have been made that it should be added as a fifth factor.

One of the first and most influential authors of institutional theory is Philip Selznick (Scott, 1987). Selznick described the structure of organizations as adaptive, and the organizational success is made up by how open the organisation is to influence from the external environment. Further, Bruton et al. (2002) argue that the collection of institutions in a country make up the economy by stating that “institutions impact norms, practices, characteristics, operations and the success of the firms and industries that operate within their influence”. As a result, it is suggested that the business environment is heavily influenced by which institutions are in place.

Furthermore, the Porter Diamond model is mainly developed for large industrial nations such as the United States and might not be directly applicable to smaller and or developing countries (Cho et al., 2016). In developed countries, where the market is working effortlessly there are often institutions in place that lower the uncertainty for the actors, for example, firms and individuals defining what's legitimate and which behaviour is acceptable (Peng et al., 2009). For emerging markets, this is often not the case. The institutions that are in place there are in general poorly developed, which may negatively affect companies. The literature on institutional theory can be split into formal institutions such as rules, regulations and laws and informal institutions which focus on culture, values, ethics and norms. In situations where the formal constitutions such as laws and rules are not fully developed or good enough, the informal institutions will play a more important role in minimizing the uncertainty (Peng et al., 2009).

When formal institutions are lacking, people rely on social ties and local networks (Peng et al., 2009). These kinds of informal institutions make it possible for the economic exchange to continue, even though there are not enough supporting formal institutions in place. In these situations it is important to build a strong social network in order to develop contracts with specific terms in order to avoid the negative effects coming from having weak formal institutions (Acemoglu & Johnson, 2005). Personal relationships among business managers can be viewed as a strategy, and is known as *guanxi* according to Peng et al (2009). However, by time more supporting formal institutions develop the importance of connections and other informal institutions will lessen gradually.

2.5 Venture capital's role in innovation systems

Networks take a central role in the national innovation system (Capron & Meeusen, 2000). It has been argued that venture capital companies are a major contributor to the innovation network. In these networks, every agent contributes a particular dynamic that adds dimension to the network. Venture capital companies add a dimension to the network related to innovation and contribute to increased robustness of the innovation system through interactions with other actors in the network, according to Ferrary and Granovetter (2009). The robustness contributes to the network's abilities to react to external change and has a positive effect on problem-solving and innovative capabilities.

Venture capital and funding are also strongly related to clusters of startups and innovation. Measurements of innovation can be made by looking at venture capital in the region. Venture capital is largely focused on high growth, high tech startups, and looking at venture capital investments in a region, in addition to the number of startups, it can also indicate the market value for said companies (Adler et al., 2019). To illustrate the importance of venture capital companies in innovative regions, the presence of such companies is what sets Silicon Valley apart from other technology clusters (Ferrary & Granovetter, 2009).

3. Method

The following chapter aims to present and argue for the thesis' chosen methodology, summarised here in brief. First a qualitative research strategy was found most suited to answer the research questions of the study. Following, a single-organisation case study at Volvo Group Venture Capital was decided to be the best method for the research, which was done by combining a literature review with empirical data collected from interviews. For the data analysis, a template analysis methodology was chosen. The chapter ends with commentary to the ethics and research quality aspects used throughout the entire study.

3.1 Research strategy

Research strategy concerns the decision to either conduct qualitative or quantitative research, or a combination of the two (Bryman & Bell, 2011). Quantitative research is used to assess relationships between conditions or "independent variables". The goal is typically to measure the effect on a separate, dependent variable, as the independent variables are being experimented with (Lakshman et al., 2000). Qualitative analysis is used to interpret, understand, and make sense of social contexts and phenomena, assessing what meaning they bring to people (Greenhalgh & Taylor, 1997).

The qualitative approach was deemed best suited for this study, based on the above-described research strategy differences. The study is intended to take an exploratory approach, to deepen the understanding of how international venture capital can initiate investments in Asia and what role venture capital plays in national innovation systems. The qualitative approach was deemed to best align with these intentions.

3.2 Research design and method

The chosen method for the research is through a single-organisation case study of Volvo Group Venture Capital. The study will focus on answering the research questions related to what aspects should be considered to examine the state of a venture capital market, and in which country to initiate investment in Asia. The literature review will, firstly, through providing understanding of previous research on the venture capital guide the formation of the framework that will be used in the examination of the six countries venture capital markets. The literature review will, secondly, help to answer which role, if any, venture capital has in innovation systems. The empirical data consists of data collected from interviews and secondary data, which will support answering the research questions.

3.2.1 Case study

A case study is, according to Bryman & Bell (2011), a common method used when researching topics in business. It is useful as an enabler for the researchers to combine different qualitative methods, which decreases the study's dependency on any single type of information source.

The objective of the case study is to understand the possibilities and obstacles for initiating investments in Asia for a corporate venture capitalist, and what criteria need to be fulfilled to be considered an attractive market for VGVC. The case study would in turn lead to findings about what informal and formal institutions affect venture capital, and lastly indicate whether national competitiveness is somehow affected by the state of its venture capital market.

To study which countries are suitable for investments in Asia for a foreign western corporate venture capitalist like Volvo Group Venture Capital, two aspects must be considered. First, one should consider the investor's market, meaning the startups in the fields of interest. Second, one should consider the factors impacting the investment process across the whole cycle, from discovery and first contact between the investor and startup, until the investment's exit (Ketels, 2005).

3.2.2 Literature review

According to Easterby-Smith et al. (2018), a literature review is done to evaluate what is already known on a subject matter and to get a deeper understanding of the investigated research question. In this study, the literature review was done to generate a deeper understanding of how venture capital could have an impact on the national competitiveness and innovative systems. The literature review process was constructed as per the method proposed by Easterby-Smith et al. The first of the four steps in the process is to carefully lay out the aim of the study and revise it until relevant boundaries of the study are set, afterwards some selected keywords should be identified. Secondly, the literature search should be initiated. The third step is to structure relevant literature found on the subject. The fourth step is to go through the literature, and iteratively read it and assess it. The last three steps should be evaluated from time to time and looped to get as much out of the literature study as possible.

The first step, in this case, was conducting a broad search to establish an understanding of what literature existed in the field of venture capital. Literature about the national innovation systems and Porter's diamond was also studied and a gap in innovation system literature was identified. All relevant articles were sorted into themes, and which simplified their access, as per the method proposed by Easterby-Smith et al. (2018). Lastly, the most relevant articles according to the aim was chosen and used in the literature review.

3.2.3 Empirical data

The collection of empirical data was split into two different parts. The first one consisted of interviews held with internal representatives at Volvo Group and experts within investments in Asia (primarily in the venture capital industry). The second part of the data was collected from secondary sources, primarily from reports constructed by management consultancies or similar on the same topic. The two types of sources are meant to together give a robust basis to answer the research question of which country is best suited for Volvo Group to initiate the Asian investment work in.

Further, the research was split into multiple phases. First, six Asian countries were chosen to be a part of the first phase. The countries were China, India, Japan, Singapore, South Korea, and Taiwan. These were selected after discussions with VGVC, where they expressed that these countries were most relevant for them. After the selection, work was initiated to identify and assess each countries' high-level investment climate, which ultimately short-listed the three countries deemed to have the most favourable conditions for Volvo Group Venture Capital. In the second phase, a more detailed framework was developed to analyse the short-listed countries, which included a set of criteria deemed critical for a strong venture capital market.

3.2.3.1 Interviews

A total of 21 interviews were conducted, not including the recurring interviews with representatives from Volvo Group Venture Capital. These were done to both get an initial high-level understanding of the Asian VC market across all phase 1-countries: China, India, Japan, Singapore, South Korea and Taiwan, but the interviews were also key to enable a deeper understanding of the phase-2 markets, namely China, India and Singapore. The interviews were both held with internal representation at Volvo Group and external interviewees.

The internal interviews were held with representatives from VGVC and Volvo Group Asia. The interviews with VGVC were held ongoing during the whole thesis period and focused on narrowing down the research question, getting an understanding of which countries in Asia were of interest for them to pursue, and understanding their business objectives of VGVC.

Interviews were also held with employees of Volvo Group located in Asia to understand how Volvo Group's operations in Asia work and how the future ambition looks to understand which countries are of most interest for Volvo in Asia. The interviews were also held to get their view of the business culture in Asia and how it differs from the western culture. An overview of the internal interviews is outlined in Table 1.

Table 1. Interviews with representatives for Volvo Group Asia

Name	Department	Position	Date of interview
Kevin Wang	Volvo Group China	Head of Connected Solutions China	2021-02-19
Elisabeth Larsson	Volvo Group SEA & Japan	Head of Connected Solutions China	2021-03-02
Dr Sudeendra Koushik	Volvo Group India	Innovation Director and Head of CampX Bangalore	2021-03-25

Given that the objective was to identify how a western CVC, such as VGVC, should initiate investments within the Asian market, external interviews were held as well. The target interviewees were people with knowledge of one or more of the six countries studied, or people with knowledge of the Asian investment market and VC market. Three different groups were identified: Asian investment experts, international VCs and local Asian VCs. The first phase of the interviews had a broad focus, and included the countries China, India, Japan, Singapore, South Korea and Taiwan. When enough data was collected to short-list the top three countries for VGVC, exclusive focus was shifted towards China, India and Singapore. See Table 2 for an overview of the interview with the external interviewees.

Table 2. Interviews with external interviewees

Name	Company	Position	Industry	Date of interview
Joel Shen	Withers Worldwide	Partner	VC	2021-02-24 2021-04-21 2021-04-30
Daniel Karlsson	Asia Perspective	Founder & Partner	Consulting	2021-02-24
Edward Chyau	Mesh Ventures	Managing Partner	VC	2021-03-01
Robert Jessing	The Scale Factory	Partner, Scale & Corporate Ventures	VC/Consulting	2021-03-01
Julien Mialaret	Idinvest Partners	Operative Partner	VC	2021-03-02
David Hallgren	Business Sweden	Vice President Asia-Pacific	Consulting	2021-03-03
Rahul Misra	Business Sweden	Senior Manager	Consulting	2021-03-04
Pritam Singh	Business Sweden	Consultant	Consulting	2021-03-04
Takaki Nakamura	Vertex Holdings	Executive Director	VC	2021-03-23
Karen Xu	WhitePeak	Head of Investor Relations and Corporate Communications	PE	2021-04-13
Shreyansh Singhal	Ankur Capital	Investment Professional	VC	2021-04-19
Kevin Waller	Northridge Partners	Partner	Investment Banking	2021-04-20
NN	Chinese VC	Investment Professional	VC	2021-04-23
Markus Bruderer	Antler	Associate Partner	VC	2021-04-23
Yue Yang Len	Gobi Partners	Investment Associate	VC	2021-05-07
NN	Indian VC	Investment Professional	VC	2021-05-11

3.2.3.1.1 Selection of interviewees

The choice of interviewees was through snowball sampling and purposive sampling. According to Easterby-Smith et al. (2018), snowball sampling is when selected representatives mediate other participants that can be useful for the study. Further, this method is preferred when it is difficult to find people that are willing to participate in the research. The snowball sampling was found to be a good strategy for this study's sampling, due to the difficulties with finding relevant people to interview, as there was no prior personal connection or relationship established. Further, Noy (2008) mentions that this method can lead to greater trust between the interviewer and the interviewees. The snowball sampling was initiated by asking representatives from VGVC about contacts with applicable knowledge of the Asian investment market. After each interview, the respondents were asked if they had other possible interviewees that could be approached.

Furthermore, the other choice of interviewees was through purposive sampling. Easterby-Smith et al. (2018) describe purposive sampling as a method that often is used when the researcher has a good understanding of which type of data is needed based on the research question and is initiated through identifying persons of interest and approaching them. The purposive sampling was initiated by desktop research for example through professional social media. The purposive sampling was increasingly used when the snowball sampling did not

result in a large enough interview group to build deep enough understanding of the Indian, Singaporean and Chinese markets.

The number of interviews was considered complete after the interviewees started to repeat things previously stated in interviews with other representatives and additional interviews were considered to not add more valuable data.

3.2.3.1.2 Interview design

Due to the qualitative character of the study, a semi-structured approach to the interviews was chosen. This allowed the researchers to be flexible while keeping the focus on the research questions. According to Gill et al. (2008), this method opens up the possibility to discover new information that was not thought of by the researchers and open up new discussions with the help of follow-up questions. Easterby-Smith et al. (2018) say that one should carefully evaluate throughout the interviewing process which questions to disregard and which to focus more on. In phase 1, the researchers applied this method by first constructing three different interview templates for the three types of interviews, and later modified the templates based on which questions contributed most to the research goal. The first interview template was constructed by conversations held with representatives at Volvo Group Venture Capital and through reflection of the literature read by the researchers. Questions were primarily asked about the nature of the venture capital market, business environment and startup culture.

When the research moved into phase 2, a new interview template was developed which aimed to answer the newly developed criteria. The questions asked in the second phase remained focused on the nature of the venture capital market as well as the startup landscape but included more in-depth questions regarding possibilities for exit, the business landscape and possibilities for collaboration with VC-funds. Both authors of the thesis participated in each of the interviews (both in phase 1 and 2), and the roles of who led the interview and who took the notes were changed from time to time in line with what Easterby-Smith et al. (2018) recommended. The interview templates can be found in Appendix A.

The interviews have been held remote, which according to Easterby-Smith et al. (2018) offers flexibility but can also make the interviewees feel less devoted and lack the non-verbal exchanges a face-to-face interview offers. Due to circumstances surrounding Covid-19, there was no opportunity to conduct interviews in person.

3.3.3.2 Secondary textual data

According to Easterby-Smith et al. (2018), secondary textual data is information that is not developed for research but has relevant applicability to the studied subject. This type of data could include reports of different kinds, data from internet websites or articles from newspapers. According to Easterby-Smith et al., the advantage of this kind of data is that it saves time and could often be of good use if the research needs historical data, which might not be possible to get if only primary sources were used. However, because of the somewhat

unclear purpose of some of the secondary data produced, one needs to carefully evaluate the data's validity before including it in the report. In this report, a collection of secondary textual data has been done to complement the primary data collected from the interviews. The purpose of the secondary textual data is to provide more context and underpinnings to the opinions from the interviews. When a secondary source has been used, it has been carefully evaluated and only sources that could be viewed as credible has been used.

The secondary data collected has been documents, reports and articles. The main type of data collected was reports from global consulting firms e.g., PwC, Deloitte, EY and McKinsey & Company. Other sources could be articles from known business magazines or reports and surveys on investments in Asia. Some data has also been collected from databases focused on venture capital and statistics such as Crunchbase, CBInsights and Pitchbook.

3.3 Data analysis

Template analysis, as proposed and described by Easterby-Smith et al. (2018), has been used during data analysis. According to Easterby-Smith et al., template analysis is about using a mix between codes that were determined before the analysis started, and codes that arose during analysis. The template analysis leverages themes which help the researchers to structure the qualitative data.

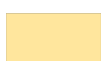
First, protocols were taken during the interview. After the interview, a more precise transcription of the interviews was done. From the transcripts, views were collected and then coded to summarise the opinions of the respondents. A code is according to Easterby-Smith et al. (2018) a short statement that sums up the view of the interviewees. After the coding, an analysis of the codes was done to identify any patterns among them. Iterative analysis was in parallel conducted on the secondary, and findings were sorted into the same themes that were developed from the interviews.

For phase 1 (short-listing three countries out of China, India, Japan, Singapore, South Korea and Taiwan), two themes were identified as being initially most significant for Volvo Group Venture Capital, which were a strong startup landscape and a strong venture capital landscape. Next, four scores were defined: a country could score between 1 and 4, with the lowest score being 1 and the highest score being 4. Scoring would depend on how favourably the country performed on the given criteria, for example, if a country did not have a rich startup culture, a low score was given. In phase 1, each of the countries were given a score depending on their conditions and the top-three scoring countries were short-listed into phase 2. An overview of the themes for phase 1 is outlined in Table 3. The scoring system is not based on absolute numbers, instead, the scores depend mainly on the relative performance of countries in comparison to each other. A visual representation of the scoring system used for both phase 1 and 2 can be viewed in Table 4.

Table 3. Phase 1, assessment of the countries based on their startup landscape and VC landscape

	Phase 1 analysis framework	
Theme	Startup landscape	VC landscape
Criteria reviewed	• Innovation activities of startups • Number of unicorns in the country • Number of startups within logistics services and transport solutions • Number of startups within electric mobility and infrastructure • Number of startups within site solutions	• VC market size • Government regulations and support for foreign investors • Number of foreign VCs • Investment rounds: speed and size

Table 4. Overview of the developed scoring system used for evaluation of the performance of the countries in the study

Legend	Conditions	Score
	Strongly beneficial	4
	Beneficial	3
	Slightly beneficial	2
	Unbeneficial	1

During phase 2, the themes VC and startup landscape were analysed more thoroughly. On top of those two themes, three additional ones, with underlying criteria, were identified as critical for VGVC's success and were consequently added to the analysis framework. The themes are as follows: differences in the business climate, fund collaboration opportunities and ease of doing exits. The theme fund collaboration opportunities was early on identified as critical due to the seeming difficulties for foreign venture capitals to invest directly in startups in many Asian countries. These were all examined and criteria for each theme were developed. In phase two, only three countries were examined, China, India and Singapore, as they had been short-listed in phase 1. In Table 5, a visualisation of the themes and criteria used in phase 2 is provided. Something to note is that in this study, the same score on different criteria can be interpreted to have the same importance for the outcome. In reality, some criteria could be more important than others, but in this framework, they are simplified to mean the same.

Table 5. Overview of the themes and criteria developed for phase 2, an assessment of how beneficial the conditions are in China, India and Singapore for investments by Volvo Group Venture Capital

	Phase 1 analysis framework		Additions for Phase 2		
Theme	Startup landscape	VC landscape	Business climate	Fund collaboration opportunities	Ease of doing an exit
Criteria reviewed	• Innovation activities of startups • Number of unicorns in the country • Number of startups within logistics services and transport solutions • Number of startups within electric mobility and infrastructure • Number of startups within site solutions	• VC market size • Government regulations and support for foreign investors • Number of foreign VCs • Investment rounds: speed and size	• Impact of informal institutions • Technological trajectories of the country	• Access to suitable funds • Strategic services provided to LPs • Ease of getting information from the startups • Number of investments in adjacent countries	• Number of exits • Ease of doing an M&A • Ease of doing an IPO • Maturity of the domestic stock market

3.4 Ethical aspects

When conducting research, it is important to take into consideration which ethical concerns that may arise (Easterby-Smith et al., 2018). When researching in a business context, Easterby-Smith et al. bring up a checklist of ethical issues that one should consider, which the authors of this study have followed.

First, one should guarantee that the interviewees' dignity is respected, and that they don't feel like the interviewers have caused them harm, for example through stress. This has been assured by the researchers by for example allowing the participants to skip questions they were not comfortable answering. Secondly, one should always have informed compliance from the interviewers and protect the anonymity and privacy of the participants in the study. To ensure this, the authors of this thesis have always been fully transparent with the participants on how the data will be used, every participant has been asked if their name could be used in the report, and those who have declined have been fully anonymised. Further, to ensure the data from the interviews have been kept confidential, all the material from the interviews such as video files and transcripts have been kept concealed and only been viewed by the researchers of this study.

Easterby-Smith et al. (2018), also brings up the importance of declaring the objective of the study to the participants. The authors of this study did this by always explaining the aim and objectives of the study and sending the questions beforehand so the participants could feel prepared and know what to expect. Finally, the authors have assured full transparency in the communication of the report to all stakeholder, both to the Chalmers and to Volvo Group by updating them about the state and progress of the research and receiving feedback.

3.5 Research Quality

To ensure the trustworthiness of the report and the quality of the research, four aspects need to be considered: credibility, transferability, dependability and confirmability (Bryman & Bell, 2011).

Credibility is determined by how trusted the results from the study could be. Two methods used to assure credibility in research is respondent validation and triangulation. Respondent validation is when the researchers make sure that the findings have been correctly interpreted, by giving the participants in the study to validate what has been said. In this study, this has been done by confirming uncertain deviants with the participants in the study, to ensure that everything has been understood correctly.

According to Bryman and Bell (2011), another method for ensuring credibility is triangulation. It is done by cross-examining data from multiple sources. In this study, triangulation has been used by using data from multiple interviews with different types of stakeholders and comparing it to secondary sources. While efforts were taken to make the research as credible as possible it was sometimes troublesome to find enough people wanting to participate in the interview from each of the six countries hence in some cases, for example, for South Korea in phase 1, the validity could be lowered. In these cases, significant effort was put into searching for secondary sources that could give additional guidance to compensate for the minor lack of primary data. Further, certain areas were difficult to find information about online, for example, data about what types of offerings VCs give to foreign investors. Therefore, much focus was given to this topic during interviews to enable collection of as much credible data as possible in this space.

Transferability concerns whether the findings generated from the study are applicable in other contexts according to Bryman and Bell (2011). One should aim for a thorough description and have the details of the study carefully defined which would enable others to use the study's findings in other settings. This has been done in the study by using quotations to precisely display the findings.

Dependability concerns the applicability of the findings at different times. According to Thomas and Magilvy (2011), it can be defined as how stable the data is over some time and if other researchers could track the decisions of the researchers. This could be done by the researchers by having a clear purpose of the study and disclosing how and which participants were selected for the study together with how the result was collected and analysed. This was done in the study by carefully describing each step taken.

Finally, according to Thomas and Magilvy (2011), confirmability depends on how much the researchers let their personal values affect their work. For example, Bryman and Bell (2011) mention that the findings from the study should not have been influenced by the opinions of the researchers, otherwise the confirmability is low. In this study, confirmability has been

assured by always asking for clarification when clarity was lacking, as opposed to assuming what the interviewee meant to say. Furthermore, the broad focus taken during research has been favourable from a conformability perspective: as the research initially took a broad focus, it was narrowed down based on the insights that were drawn, as opposed to narrowed down by any predetermined desires of which direction to take with the research.

4. The venture capital market

The venture capital industry was first established in the US. The first modern venture capital (VC) firm was founded in 1947 and called American Research and Development (ARD) (Gompers, 1994). The main idea for ARD was to finance technologies that Americans developed during the second world war. In 1957, the venture capital industry started to grow on the American West Coast especially in California. In 1992, the West coast had grown enough to be seen as the main innovation hub in the US and 48% of American capital invested in ventures was directed to ventures located on the West Coast (now famously referred to as Silicon Valley). After venture capital became institutionalised in the US the practice spread to Europe (Bruton et al., (2005). In the 1970s and 1980s, European venture capital companies started being formed, and in the mid-1980s, a similar development occurred in Asia as the VC market expanded its footprint there.

4.1 How the venture capital market works

Venture capital (VC) is a type of funding for early-stage entrepreneurs and companies. Due to the companies being in an early stage, they often lack operations and often have not started generating revenue (Young, 2020). As the companies are in the early stages of their formation, the investment is usually associated with high risk. VC is a subset of Private Equity (PE) and can be divided into two different groups: independent venture capital (IVC) and corporate venture capital (CVC) (Bertoni et al., 2011). The most significant difference between them is where the sourced capital comes from. IVC companies typically raise funds and then allow third-party investors to contribute, while CVC's source funding from their parent company.

4.1.1 What is independent venture capital?

IVC is the dominant form of venture capital and is usually only referred to as VC (Bertoni et al., 2011). Organisationally, the VC companies consist of general partners (GP's) backed up by a team consisting of investment analysts. The overall objective for a VC is to invest in companies in the early stages of their growth, nurture them and eventually exit the investment at profit (Zider, 1998). This can typically be split into two sub-objectives: raising capital through managed funds, and secondly identifying new companies to invest in and nurture.

A venture capital fund is set up by general partners and consists of investments in multiple early-stage companies. Managing funds generally takes a few operational steps. First, the GP's set up a clear investment strategy for what they should invest in (Ramsinghani, 2014). For example, the strategy could detail what type of industries should be focused, and what criteria for investment a company must meet to be invested in. Following that, a period starts where the GP's raise money from investors referred to as limited partners (LP's) (Bertoni et al., 2011). This process varies in time consumption, it can take from some months up to years to finalise the funding for a fund (CFI, 2021).

The limited partners can be high-net-worth individuals, pension funds, corporates or foundations (Ramsinghani, 2014). These limited partners expect to get a return of the capital they put in a fund, and they usually evaluate the funds carefully before investing, previous track record of the VC's prior funds and the trust to the GPs are both considered (Zider, 1998). The way collaboration works between the LPs and the fund managers is regulated in the Limited Partnership Agreement, LPA (BVCA, 2002). According to BVCA, the LPA regulates all obligations and rights of both partners, including rights of information, reports and fees. The liabilities of the LPs and the GPs can also vary across different funds (Medium, 2018).

The VCs normally raise capital through periodic funds, which typically are active for around ten years (Gompers & Lerner, 1999). The standard practice for VCs is to raise a new fund or a new version of the fund every 2-5 years. In Figure 1, an overview of a fund structure is given. When the target amount for funding has been reached by the fund, the general partners will close the fund for further investments and initiate the process with reviewing potential companies to invest in.

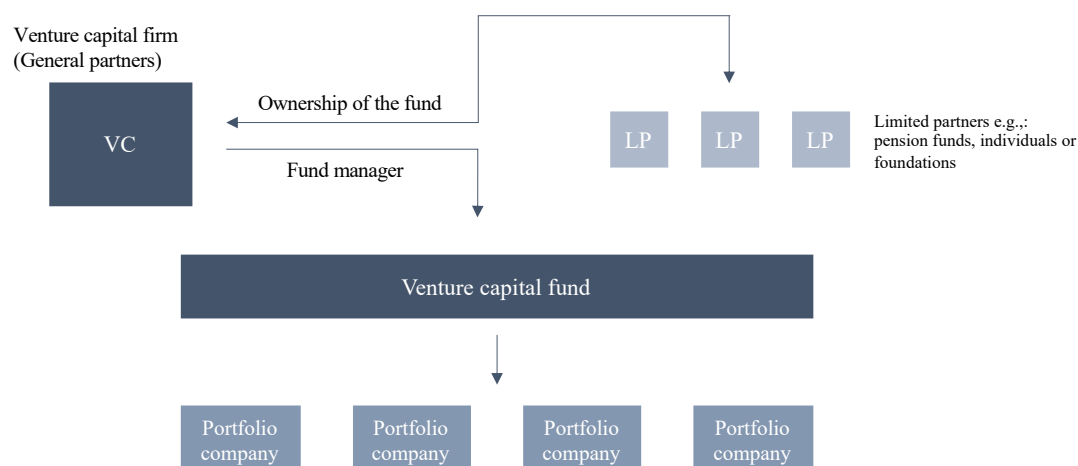


Figure 1. Overview of a typical fund structure for venture capital funds. Adapted from NVCA (n.d.)

When the general partners start reviewing potential portfolio companies, they seek investments that fit their strategy and can demonstrate a potential to return multiples of the invested capital (Ramsinghani, 2014). This process is initially started by the VC receiving business plans, submitted by hopeful startups. The VC reviews these, and only a few of them get selected for further due diligence wherein the company is evaluated in deeper detail, looking at its technology, strategy and assets (Gompers & Lerner, 1999). Lastly, the company or companies that are identified to have sufficient potential will be invested in by the general partners. The return to the partners from the investments will first be realized when the portfolio companies are sold, meaning when an exit is initiated, which typically takes place 6-8 years after the investment (Ramsinghani, 2014).

The purpose of the exit is to get back the invested capital, with a possible return. There are different routes for the exit, two of the most common exits are through an initial public offering (IPO) and through mergers and acquisitions (M&A) (Ramsinghani, 2014). An M&A is usually done by selling the portfolio company to a corporation, which in turn returns the capital to investors. Despite the M&A being the most popular way of exiting, an IPO is usually more sought after due to the high return it gives to investors. However, in some instances, a corporation purchasing a technological startup for strategic reasons may pay more than an IPO (Deloitte, 2021a). An IPO is executed by listing the company on a public stock market after which the VC company sells off its shares and receives money.

A third method for exiting that has become popular recently is through a special purpose acquisition company (SPAC) (Chen, 2020). A SPAC is a company listed on a stock exchange, but with the only purpose to acquire other existing companies. When the SPAC is listed on the stock exchange the business has no own operations and the purpose of the IPO is to acquire companies in a specific geography or a specific industry (PwC, 2020a). When the SPAC is listed, it has 18-24 months to find one or more companies to merge with, if the management team of the SPAC does not go through with any mergers or acquisitions the SPAC will be liquidated. The report from PwC argue that SPAC is a great choice for companies that want in on the stock exchange to obtain access to liquidity, but for various reasons don't want to go through with a traditional IPO which is often time and money consuming. For LPs in the venture capital fund this means that the SPACs provide liquidity to them in a similar way to how a traditional IPO would have worked, but faster (Pitchbook, 2021). However, as the SPAC requires the same paperwork and preparations as an IPO, sometimes an IPO can be preferred as it gives the startup time to prepare (Deloitte, 2021a). Besides M&As, IPOs and SPACs there are other methods for exiting, but these are typically less south-after and not as common in general (Ramsinghani, 2014).

For an exit to be successful and return liquidity to the investors, the timing must be right (Wang & Tseng, 2006). The external environment such as economic, social and political climate, as well as the performance of the company, are two factors that need to be taken into consideration when looking at exit opportunities. When the external environment is stable, the technical risk of the company is lower as the management and operations of the company are more predictable, the chances that the exit is successful are increased.

Typically, VC companies invest rather locally but according to Park et al. (2019), more investments seem to be made overseas. One hypothesis is that the western markets are becoming increasingly saturated. Consequently, more cross-border investments are happening, which results in foreign VCs gaining more institutional knowledge which in turn gives them better tools to help the startups become internationalised. Being a foreign investor can have both positive and negative consequences according to Woo (2020). Woo argues downsides include negative effects coming from differing institutions, such as laws and culture. It is also harder to collaborate with the startup due to the geographical distance. However, a major upside to having an active presence abroad is that the VC can provide services to a startup that is

expanding abroad in a way domestic VCs cannot, which can be seen as a competitive edge international VCs have over domestic VCs.

4.1.2 What is corporate venture capital?

In the last decades, corporate venture capital (CVC) has become an important source of capital for early-stage companies. CVC has become increasingly common among large corporations and means that a dedicated part of the company systemically makes minority investments in startups with innovative technologies (Ma, 2020). Corporate venturing can be considered a strategy for long term performance for the company (King, 2002). Contrary to the venture capitalist's sole focus on financial return, while the financial part is still important, corporate venture capital seeks to maximize shareholder value, which focuses on the add strategic importance of the collaboration with the startup as well as financial return (Ma, 2020). Studies have shown that the main focus for CVC's is the strategic value with the objective of investment supporting internal innovation and supporting the company's core business (Hellmann, 2002).

Corporate venture capitals can invest in venture capital funds, but due to their need for a strategic aspect of investing they preferably don't invest in funds with only a financial focus (Ma, 2020). This would mean any return from the fund that is non-financial and, in any way, supports the objectives of either the company investing or the company receiving the investment. There are several ways in which a fund investment can achieve the strategic aspect of investing. According to BVCA (2002), the most common fund structure is the one using the limited partnership as a fund vehicle and having a limited partnership agreement. This means that the limited partner has no direct link to the portfolio company and that all information goes through the fund manager.

Two main views can be identified on CVC's role in the company. One is to, via investing activities, support and build up a corporation's innovation capabilities. This originates in the theories regarding knowledge acquisition, suggesting when a company's internal innovation capability swindles, a corporate venture is used to acquire external knowledge and information to boost their own capabilities. The other view suggests that corporate ventures are used to further augment the corporation's strengths. This view is based on the fact that in the fields where a company is a technology leader and thus has strong internal innovation capabilities, they can use this knowledge to seek out and find startups that have the potential to complement the company's innovation activities (Ma, 2020).

By investing in startups, the larger investing company can benefit from the agility of the smaller company, and manage its own risks of innovation (King, 2002). For a startup, the selection of an investor depends on the valuation as well as the level of assistance the investor can offer (Hellmann, 2002). However, there are some conflicting views on whether this collaboration is actually beneficial for startups. According to a study, some entrepreneurs raise the fear that the company might pursue their corporate objective at the expense of the startup's (Hellmann, 2002).

5. Result

The following chapter will present the findings from the study. The result is divided into two different phases. Phase 1 examines which three countries of China, India, Japan, Singapore, South Korea and Taiwan qualify as most interesting for Volvo Group to initiate their investment work in Asia. This evaluates the countries on two parameters: the maturity of their startup and VC landscapes. These parameters are focused as they have been deemed to be the most critical factors for successful investments to take place. In phase 2, the same criteria are investigated in deeper detail for the three selected countries China, India and Singapore, and complemented by other important factors for successful investment operations: the business climate, fund collaboration opportunities and ease of doing an exit.

5.1 Phase 1: The selection of three countries

In the initial phase, two criteria were shown to be most critical for VCs to establish a successful presence in a foreign country. First, the country needs to have a well-developed startup landscape as well as a VC market that promotes foreign investors with low cultural barriers. In Table 6, a visualisation of how favourable the conditions are in China, India, Japan, Singapore, South Korea and Taiwan is given for the two identified themes: startup landscape and VC landscape.

Table 6. Identified criteria needed for a successful investment to take place and how favourable China, India, Japan, Singapore, South Korea and Taiwan are for each criterion.

Theme	Assessment by country					
	China	India	Japan	Singapore	South Korea	Taiwan
Startup landscape	High startup activity in all interest areas	Medium startup activity in all interest areas	- Some activity in the interest areas - Innovation is focused to large corporations	High startup activity in all interest areas	- Some startup activity in the interest areas - Innovation is focused to large corporations	- Some startup activity in the interest areas - Strength lies in other non-target areas
VC landscape	- Large VC market - Limited international VC activity	- Quite large VC market - Promoting foreign investors	- Transparent and robust legal system - Small VC market compared to similar developed countries	- Quite large VC market - Favourable conditions for foreign investors	- Well developed legal system - Not promoting foreign investors	- Not many international actors - Limited government support

Strongly beneficial
Beneficial
Slightly beneficial
Unbeneficial

5.1.1 The startup landscapes in China, India, Japan, Singapore, South Korea and Taiwan

One of the themes that were identified as the most important for a VC is a good startup landscape. In Volvo Group Venture Capital's case, the countries must demonstrate a thriving startup ecosystem in one or more of the three key areas: logistics services and transport solutions, electric mobility and infrastructure and site solutions.

The participants in the study have overall argued for Asia as a market of interest for Volvo due to the technological development in these countries. Volvo Group already has a presence in Asia, and it would most likely grow if collaborations and investments are initiated in selected countries. Furthermore, one interviewee highlighted the fact that the innovation in Asia often is local, which means that trying to enter the Asian market with European innovations might be hard and therefore it is important to look at what the Asian startup landscape has to offer to not risk missing out on potential customers in Asia.

The startup landscapes in China

The overall response from the interviewees was that China has a lot of startups spanning all VGVC target areas. Some argue that China is taking leadership in many of the areas such as logistics and electronic mobility, and the startups are getting a lot of attention and support from different actors in Asia. Therefore, China is deemed to have strongly beneficial conditions for VGVC (dark green) for the startup landscape theme, see Table 6. This corresponds with the findings from Business Sweden's report on opportunities in the Asia Pacific (APAC) region (2021), where they found high activity in all target areas.

The startup landscape in India

When asked about India's startup scene, the interview responses provided a mixed perspective, but overall the conditions were deemed beneficial for VGVC (light green), see Table 6. Some argued for large investments happening within the logistics sector, driven by the lack of good infrastructure as well as a lot of investment happening within the development of services. One of the respondents highlighted the large number of unicorns present in India, as an indicator for the flourishing startup ecosystem. However, not that many of the interviews brought up India as the top choice for international investors.

The startup landscape in Japan

In Japan, the common view in the interviews has been that innovation is mainly happening within big corporations and that the country is not promoting independent startup activity. Therefore, Japan was deemed to have slightly beneficial (yellow) conditions for VGVC regarding the startup landscape, see Table 6.

In a report by Suzuki et al. (2002) they mention that in Japan, most highly educated people prefer to work in large corporations, and a smaller limited number of people start their own business. One reason for this may be that in Japan it is seen as more prestigious to work for a large corporation rather than a small company.

Further, the report from Business Sweden on opportunities in the Asia Pacific region (2021) shows that most VC investments are going into AI, software as a service, and fintech. For Japan, their investing is most focused on finding solutions for the ageing population with the help of automation and robotic solutions. There are some activities happening in Volvo Group's focus areas, but as mentioned above, the main activity in the selected areas is happening within large corporations which is out of Volvo Group's scope.

From a regulatory perspective, smaller companies can be at a disadvantage in Japan, due to traditionally strong bonds between the government and large corporations, which have had an impact on policies skewing negatively against smaller companies (Jackson & Debroux, 2008). However, they argue that the Japanese government is working towards a more pro-entrepreneurial culture. Currently, there is generally a low level of entrepreneurial attitude in Japan. This is indicated by the low levels of entrepreneurial activities in both business startups and new business investments (Honjo, 2015).

In essence, Japan is less attractive for VGVC as most entrepreneurial efforts are focused on areas outside of Volvo Group's scope, and it is done primarily by larger corporations. Interviewed experts confirm this perspective, they are not perceiving the environment in Japan as good for business startups, and furthermore, the stability of employment in large firms deter from self-employment.

The startup landscapes in Singapore

Many interviewees suggested Singapore as an ideal candidate for VGVC as their startup ecosystem fits with Volvo Group's objectives. For example, logistics is a large sector in Singapore, driven by access to their big port and urbanisation and a lot of innovation is happening within electric mobility and infrastructure and some in site solutions. According to the interviewees, the innovation activity of startups in Singapore is high. Overall, the startup landscape in Singapore was deemed strongly beneficial for VGVC (dark green) as seen in Table 6.

The startup landscape in South Korea

South Korea was only brought up once by one of the respondents, who made the point that the country is similar to Japan in that big corporations drive the development of innovations. However, South Korea was never directly mentioned when interviewees were asked about which country VGVC should initiate their Asian investment work in. Therefore, South Korea was deemed to have a slightly beneficial (yellow) startup market for VGVC, see Table 6.

According to a study made by the World Law Group (2021), venture capital funds in South Korea mostly invest in sectors such as mobile software, healthcare and the semiconductor industry, which are out of Volvo Group's scope. Similarly, Chung and Kang (2018) have found out that most startups in South Korea use bank loans as the primary source of financing instead of venture capital which leads to the entrepreneurs taking fewer risks. This is because if the business fails it might lead to entrepreneurs undergoing personal default. In turn, this hinders the startup culture of the country.

The startup landscape in Taiwan

Taiwan has been mentioned by some of the interviewees as a potential interesting country for VGVC, but the most common view is that Taiwan's strength lies in the semiconductor industry

and not so much in VGVC's target areas. Therefore, Taiwan's startup market was deemed slightly beneficial for VGVC (yellow), see Table 6.

One interviewee illustrated the Taiwanese startup market as consisting of two different types of companies. One being younger people that replicate international companies and the other people that break out from TSCM (the largest semiconductor manufacturer in Taiwan) and start something within the semiconductor industry. A report from the Taiwan Institute of Economic Research (2020) confirms that the top industries in Taiwan for VC investments are health technology, electronics, internet of things, and media and entertainment. Furthermore, Taiwan is showing similar tendencies as Japan and South Korea, as rather than starting new companies, it seems to be more prestigious to get a job at a larger corporation (Forbes, 2014).

5.1.2 The VC landscapes in China, India, Japan, Singapore, South Korea and Taiwan

When doing cross-border investments the investor has to know about special regulations and conditions in general for foreign investors in the country of interest. These regulations and conditions vary in degree of formality and importance and can be difficult to assess for a foreign investor who is new to doing business in the country of interest.

It is also of interest how large the VC market size is, as it can be an indicator for the number of possible deals. According to CBInsights, VCs invested around 90 billion USD in Asian tech companies in 2020 (CBInsights, 2021a). The most well-funded countries in Asia were China and India, with both countries separately having total funding of over 10 billion USD since 2016. Further, according to the analysis, Singapore and South Korea have had total funding since 2016 of 1-10 billion USD, while Japan and Taiwan have the lowest total VC funding of only 100 million-1 billion USD.

The VC landscape in China

The VC market size in China was around 45 billion USD in 2019 (KPMG, 2020a; KPMG, 2020b; KPMG, 2020c; KPMG, 2021). According to the interviews, China is not as supportive of foreign investors as Singapore and India. One of the interviewees mentioned that it is harder for an international VC to invest in China compared to a local actor. According to the US-China Investment Project (2020), there have historically been policies in China that have restricted foreign investments in local startups, but reforms of those have made it easier for foreign VCs to enter the country. Still, some restrictions remain. For example, capital controls have been imposed together with other rules that are hampering international players which is why the VC landscape in China is not fully optimized for foreigners. Also, the amount of capital required in China can be very large compared to other markets which could hinder some foreign investments according to interviews. However, the Chinese VC market is still strong and the largest one in Asia and the conditions are regarded to be somewhat favourable (Zinser, 2021), therefore the conditions for the VC market was deemed beneficial for VGVC (light green), see Table 6.

The VC landscape in India

The VC market size 2019 in India amounted to 11.1 billion USD (Bain & Company, 2021). Interviewees agreed it was quite simple for foreign companies to do business in India. According to interviewees, the Indian government is promoting foreign capital and conducting actions to capture international actors. This is supported by Bain & Company (2020), who suggests that the Indian government has tried to improve the conditions for investors in India, by introducing regulatory programs which are meant for making the VC landscape easier to operate in. For these reasons, the Indian VC market was deemed beneficial for VGVC (light green), see Table 6.

The VC landscape in Japan

When asked about Japan's regulations for VCs most of the interviewees said that Japan has a transparent and robust legal system. However, the culture and certain regulations can make it hard for foreign investors. Commenting on the difficulties with culture and linguistics barriers one interviewee mentioned that the language barrier is a significant issue with commercial issues and that they could only imagine the increased level of difficulty for cutting edge technology. According to Santander (2021a), the flows of foreign direct into Japan are small compared to similarly developed countries. This is closely connected with the Japanese business culture, where business is preferred to be done locally with already known partners rather than internationally.

According to Kirihata (2018), Japan's VC market is not as fully developed as equivalent countries. In 2018, the VC volume of venture capital investments in Japan was circa 2.3 billion USD (OECD, 2021). Business Sweden (2021) argues that there are not many international VCs in Japan and that this is a result of the late booming of the Japanese startup ecosystem. However, the Japanese government is trying to change this. According to Business Sweden (2021), Japan aspires to have 20 unicorns by 2023 and expand the country's ecosystem of startups by improving the conditions. For example, the Japanese government has introduced some tax incentives that can be used by foreign actors that were created to both help international as well as local businesses in Japan. Thus, Japan's venture capital landscape might be of interest for Volvo in the future and was deemed as beneficial for VGVC (light green), see Table 6.

The VC landscape in Singapore

Many interviewees argued that Singapore is a very open country that has taken actions to attract more foreign capital and has become a hub for international investors in Asia. One interviewee commented that Singapore's lack of its own resources has made them more open to international capital and goods. Furthermore, one interviewee mentioned that many of the international venture capitals that decide to enter the Asian market have their headquarters in Singapore. The markets in SEA have had increasingly high total funding (for example, Indonesia with 1 billion USD) since 2016 (CBInsights, 2021a). In 2019, the size of the VC

market was 8.6 billion USD (Vertex, 2021). For the above reasons, the VC landscape in Singapore was deemed strongly beneficial for VGVC (dark green), see Table 6.

The VC landscape in South Korea

In 2019, the volume of venture capital investments in South Korea was around 2.7 billion USD (OECD, 2021). South Korea is according to an interviewee quite similar to Japan in the sense that the legal system is well developed, but as mentioned in the section about the startup market in South Korea the majority of the participants in the study did not bring up the country as having an attractive and foreigner-friendly venture capital industry. Therefore, the VC market in South Korea was deemed slightly beneficial for VGVC (yellow), see Table 6. According to the Korean Venture Capital Association (2016), the Korean government is promoting the venture capital industry by initiating tax incentives to venture capital operations, but this incentive only provides resources to local venture capital firms.

South Korea has long been influenced by the ‘chaebol’, which are family-run mega-conglomerates that historically have made South Korea one of the leading economies in the world (Bloomberg, 2019a). However, this type of culture may not be so well suited to modern economies. For Korea to become a global startup hub, the country needs to break loose from the family conglomerates and start focusing on getting more people to start businesses, according to Bloomberg. To have an economic system revolving around a few big conglomerates is according to Millard (2020) negative in today's society because it leads to an absorption of all the talent and hindering entrepreneurs from realising their ideas. Some policies have been put in place to try to get the startup market to take off but there is still a long way to go.

The VC landscape in Taiwan

According to Fulco (2020), the startup scene in Taiwan is not as internationalized as the Taiwanese government aspires it to be. In order to become a global hub for venture capital, Taiwan needs to, according to the author, support startups wanting to go outside of Taiwan's borders better as well as improving regulations to attract more international actors. Further, the number of Taiwanese venture capital deals amounted to 669 million USD in 2019 (Taiwan Institute of Economic Research, 2020).

The interviewees highlighted the lack of international VCs in Taiwan, as well as the fact that most domestic VCs don't have any reach outside of Taiwan. Interviewees also underline the fact that the Taiwanese government is not helping investors sufficiently. One says that in the last 20 years, there have been many policies that needed to change to facilitate for investors, but it has not been done. So, overall, the conditions were deemed slightly beneficial for VGVC (yellow) in Taiwan, see Table 6.

5.2 Phase 2: A detailed study on China, India and Singapore

In phase 2 of the study, the three countries selected in phase 1 will be further explored according to the five themes: business climate, startup landscape, VC landscape, fund collaboration opportunities and ease of doing exits, with underlying criteria.

5.2.1 Business climate

In Asia, most cultures are high context cultures according to Hall (1976). This means that a lot of the communication is conducted outside of the actual words. One characteristic of high context cultures is that they enhance the difference between themselves and outsiders to a higher extent than low context cultures. In high context culture, loyalty is taken for granted and business relationships can last very long compared to low context cultures. As many western cultures such as Northern European (including Sweden) and American cultures are relatively low context cultures (Hall, 1976), doing business in Asia might differ from what doing business at home is like for western companies. Something present in Asia, mentioned by multiple interviewees and based on contact networks and relationships are the conglomerates. Interviewees describe these large forms of organisations spanning entire countries. Conglomerates could be either very large companies or like in the case of Singapore the state.

“If you have a link to Asia, you can do business in Asia. If you don’t have a link, people will question what you are doing there doing business.”

To determine how favourable the business climate is in China, India and Singapore for VGVC, two criteria were found to be most critical, the first one is the impact of informal institutions and the second one being technological trajectories. The result and scoring for the countries are presented in Table 7.

Table 7. *Identified criteria for an advantageous business climate and how favourable China, India, Japan are for each criterion.*

Theme	Criteria	Assessment by country		
		China	India	Singapore
Business climate	Impact of informal institutions	 - Need for a strong local network - Need for political ties	 - Business culture quite open to foreigners - Legal system is quite difficult to understand	 - Similar business climate to the West - Very open to foreign businesses
	Technological trajectories	 - Push for high tech consumption - World technology leader	 - Technology is developing quickly - Scored low on competitiveness	 - Global innovation hub - Scored high on competitiveness

 Strongly beneficial
 Beneficial
 Slightly beneficial
 Unbeneficial

5.2.1.1 The business climate in China

In China, it might be difficult for a foreigner to do business unless they are familiar with the high context culture. Also, political ties in China can be of importance in conducting business. China is a world technology leader in areas such as AI and electric infrastructure, and the technology development is high. Due to this, the impact of informal institutions was deemed slightly beneficial (yellow), and the technological trajectories were deemed strongly beneficial for VGVC (dark green), see Table 7.

The impact of informal institutions in China

In an emerging economy, institutions are not fixed yet. This means companies will seek informal ways of developing and operating. Hall (1976) argues that as a consequence of being a high context culture, China is a relationship-driven country. Interviewees suggested that to succeed in China, one needs to have informal relationships, either political or some other kind. This is supported by Tian et al. (2019), who argue that in China, government-business relations are important for the survival and development of the business due to the government's extensive role in the country in public resources and disposal rights. Anderson et al. (2017) argue that political ties help businesses survive despite an insufficient institutional system. Tian et al. (2019) mean that governments are more inclined to help companies with political ties with business problems. The government can, with tax incentives and policies, support select companies or industries.

In order to form relationships, language is essential. According to interviews, if one does not speak Chinese, it is hard to form the kind of informal relationships that are needed to gain important business information. In the venture capital industry, relationships make the whole industry and without relationships, one will not have access to the relevant deal flow, nor be able to assemble the right team, for example, legal help. Interviewees mentioned the issue of communicating with entrepreneurs and judging the businesses without proper language skills.

One risk raised in interviews is the need for local knowledge. If the investor is not knowledgeable about the local businesses, they risk getting duped. One example commonly mentioned was the risk of paying a much higher price than local investors. One interviewee highlighted the issue of fake data in circulation, creating difficulties to properly perform due diligence and thus risking bad investments. Pukthuanthong and Walker (2007) describe the need for local knowledge and understanding of local culture shows that while western businesses more heavily rely on formal institutions like contracts and regulations, in China more focus is on the informal institutions, such as relationships and *guanxi*, because the formal institutions are insufficient. While the West is more focused on openness and profits, in China, networking and hierarchies are more emphasised. In the West, information disclosure to shareholders is of great importance, slightly opposed to China where it is generally accepted that all stakeholders don't share the same information.

The technology trajectory of China

According to Deloitte (2019a), as China's traditional heavy industry is declining, the government is pushing for an increase in domestic high-tech consumption. In the last few years, China has taken leadership in many technologies, such as mobility, electrification and AI. An interviewee explains this as a consequence of the government deciding not to be reliant on the West anymore. This means China is building their own integrated supply chains in multiple technologies. According to Huang and Sharif (2016), there are three reasons China is becoming a world technology leader: the market size, technology innovators in China have access to a huge domestic market, the government are authorized to impact policies for the industry as well as provide the necessary infrastructure and lastly, the technology spillovers and from globalization. The Chinese government is promoting industries such as renewable energy and environmentally friendly vehicles offering grants, tax benefits and more. When it comes to how competitive China is overall, they are placed as 20th in the IMD World Competitiveness ranking 2020 (IMD, 2020).

5.2.1.2 The business climate in India

India is an emerging market, the world's largest democracy and by some researchers predicted to become the world's third-largest economy by 2050 (Lakshman, 2015). By 2018, the economy was growing by 7.5 % per year (Netherlands Worldwide, n.d.a). The business culture is quite easy to understand, however, the legal system and regulations can be more difficult for foreigners to comprehend. India has a lot of technology development which is fuelled by a large domestic market. Due to this, the impact of informal institutions and technological trajectories were both deemed beneficial for VGVC (light green), see Table 7.

The impact of informal institutions in India

According to Lakshman (2015), Indian society is more and more changing towards western values such as materialism over the traditional non-materialistic values. Something highlighted in interviews, which is also supported by Netherlands Worldwide (n.d.a), is that the Indian market is very diverse and complex. For this reason, local ties, and personal relationships are of high importance. Relationships both on a personal and professional level are required to make business deals according to Netherlands Worldwide. India is a former British colony, and as such has historical connections with the West. For this reason, interviewees suggested that the value of relationships in business is not as strong in India as in other Asian cultures.

Interviews suggested that the language is not a significant barrier when doing business in India. This is supported by Lakshman (2015), who claims India might have the largest collection of English-speaking managers. This is somewhat contradicted by the EF English Proficiency Index (EF, 2020a; EF, 2020b) wherein 2020 India is in 50th place of 100 measured countries, after for example China in 38th place. However, 2020 is a significant drop for India who between 2011 and 2019 largely was placed in the top 30, even in 14th place one year, whereas China has virtually lagged behind India until 2020. Even so, in India, English is the official language for the legal system as well as higher education and the main language used in media and business (BBC, 2012).

Being an emerging market, according to Barry et al. (2021), India has not perfected their formal institutions such as legal systems, and therefore tend to rely on informal institutions such as personal relationships for legitimacy. According to Netherlands Worldwide (n.d.a.), India has a well-developed legal system, however, it can be very difficult to understand for a foreigner. Interviews emphasised the slowness and inefficiency of the Indian judicial system. One potential issue raised by Lakshman (2015) is the heterogeneity of the legal system, where regional decisions can differ from central laws. This means in order to do business, individual state legal practice has to be considered. Furthermore, India ranks in the lower half of both Ease of Doing Business Index by the World Bank Group and the Public-Sector Corruption Index, something that is indicative of the challenges a foreign actor might face in India (Joshi et al., 2019). However, interviews suggested that it is beneficial to do business in India and that the business culture is good, despite some hassles with regulations.

The technological trajectory of India

In the 1990s, India opened up to international companies, and the Indian government is increasingly supportive of international competition according to Lakshman (2015). This is also mentioned in interviews, suggesting the government is helping foreign actors enter various sectors. According to a report from MarketLine (2019), the technology in India is developing very quickly, however, it is not yet close to the levels of China or the US. Similar to in China, the technology companies have great use of the significantly large domestic market in trying out products.

According to interviews, e-commerce is a key industry for India and growing fast, and this can be supported by the fact that India has a large increasing young internet-using population (MarketLine, 2019). According to MarketLine, foreign investments have had a significant role in the fast technological development of India, where leading industries are e-commerce, IT and financial services. In industries such as automotive and AI, there has been explosive development, but still, they are behind the leaders' China and the US. When it comes to India's competitiveness, the country was ranked as number 43 on the IMD World Competitiveness Ranking 2020 (IMD, 2020).

5.2.1.3 The business climate in Singapore

Singapore is a country with influences both from the West and the East. Doing business in Singapore is similar to the West in some instances, and in some not, for example in the strong focus on relationships. Overall Singapore is highly developed in many technologies as well as being a global centre for innovation. For this reason, both impacts of informal institutions and technological trajectory were judged to be strongly beneficial for VGVC (dark green), see Table 7.

The impact of informal institutions in Singapore

Singapore is, according to interviews, one of the countries in Asia that resembles the West the most. A common theme seen in the interviews is that Singapore is open and receptive to foreign

culture and ways of doing business, different from many other countries in SEA. Interviewees suggested that this is a consequence of the country lacking domestic resources.

Singapore's culture is a product of western and Eastern influences (Ang & Stratton, 1995). Previously, Singapore was a British colony and therefore has cultural traits from that time, for example, one of their official languages is English. However, Singapore has its own culture and there is a difference if you compare doing business in Europe/the US to Singapore. According to Santander (2021b), business in Singapore is heavily influenced by relationships, which is seen in many of the other Asian countries as well. Creating a strong long-term bond between business partners is often preferred than closing deals quickly.

Further, decisions are usually taken mutually in a group, often the group's needs are put before one individual. According to Hofstede (Hofstede Insights, 2021) these types of societies are collectivistic. The collectivistic relationship-driven society was a theme often brought up in the interviews, and some interviewees pointed out that unlike some other countries in Asia such as Japan and South Korea, business in Singapore is done with the government and not families. However, in a similar way, the government works as a conglomerate in Singapore, and according to interviews, all business ties back to the government in some way. To build trust, one needs to build solid and long relationships.

“In Sweden, you can come with a proposal from an unknown firm and get accepted, but in Asia, a lot more trust is needed. If you get in contact with the conglomerate, you will establish trust and you can work with them.”

The technological trajectory of Singapore

In the years following Singapore's independence, the country managed to quickly become one of the most developed economies in the world (Koh, 2006). According to IMD (2020), Singapore is scored high on the IMD World Competitiveness Ranking. As of 2020, they were ranked as number one in the world. A lot has been done in order to continue this development, Singapore has for a time now set up a “Smart Country 2025 Plan”, where the objective is to incorporate the “internet of things” and technologies in Singaporeans everyday life (Gao et al., 2020). This is done to allow innovation to happen quickly and have the development of technologies moving even faster. According to Wong and Singh (2008), the government has managed to establish the country as an innovation hub with a focus on global businesses, with a major focus on R&D to develop technologies quickly and to foster innovation.

5.2.2 Startup landscape

In the last decade, the number of startups in Asia has increased as the ecosystem around the startups concurrently has gotten better. In recent years, the number of startups succeeding in raising funds has tripled, and the volume of money invested has increased by a factor of five (Deloitte, 2021b). According to McKinsey & Company (2019), there are strong networks spanning Asia in development. One is the industrialization network where an increased consumption and maturing domestic supply chains play a major part. Another related network

is made up of new technology and capital which leads to the creation of clusters. 71 % of investments in Asian startups originated in Asia. Investments in Asian startups are growing more than in any other region (McKinsey & Company, 2019).

To determine how favourable the startup landscape is in China, India and Singapore five criteria were found to be most critical for success. High innovation activities of startups, many unicorns, many startups within logistics services and transport solutions, many startups within electric mobility and infrastructure and many startups within site solutions were all considered favourable. The result and scoring for the countries are presented in Table 8.

Table 8. *Identified criteria for an advantageous startup landscape and how favourable China, India, Japan are for each criterion.*

Theme	Criteria	Assessment by country		
		China	India	Singapore
Startup landscape	Innovation activities of startups	- High entrepreneurial activity - Strong innovation capability	- Innovation activity has increased the last decade - Scores low on the Global Innovation Index	- High entrepreneurial activity - Small domestic market
	Number of unicorns	227 unicorns in total in 2020 - Second most in the world	30 unicorns in total in 2020	5 unicorns in Singapore in total in 2020
	Number of startups within logistics services and transport solutions	- High activity in the sector - Large e-commerce market drives innovation in logistics	- High activity in the sector - Innovation driven by underdeveloped infrastructure	- High activity in the sector - Logistics services is the most common area for startups in SEA
	Number of startups within electric mobility and infrastructure	- High activity in the sector - World leaders in EV technology	- Some activity in the sector - Mainly focused on two and three-wheelers	- Medium activity in the sector - Growing demand for EVs
	Number of startups within site solutions	- Medium activity - Around 10 deals for site solutions in 2020	- Some activity in the sector - Driven by underdeveloped infrastructure	- Some activity in the sector - Some innovation activity connected to the large port

Strongly beneficial
 Beneficial
 Slightly beneficial
 Unbeneficial

5.2.2.1 The startup landscape in China

China has one of the world's most active startup landscapes, with the second most unicorns after the US. There is a high activity within both the logistics services sector and electric infrastructure, with somewhat lower activity for site solutions, but still many opportunities within all VGVC's areas of interest. Due to this, all criteria but the number of startups within site solutions (which was judged to be beneficial, light green), were judged to be strongly beneficial for VGVC (dark green), see Table 8.

Innovation activities of startups in China

The Chinese culture promotes entrepreneurship (Pukthuanthong & Walker, 2007). China has, according to McKinsey & Company (2019) developed a strong innovation capability. Almost half of the global applications for patents stemmed from China, and almost a third of the world's unicorns are Chinese. According to a report by Business Sweden (2021), the Chinese startup market within VGVC's areas of interest; logistics services, electric infrastructure and site solutions, is the most plentiful in Asia. Interviewees argued that there is a lot of activity within logistics and transportation in China. This is supported by a report from KPMG (2021) that states that logistics is a major trend for startups in China, as well as in Asia overall.

The number of unicorns in China

China had 227 unicorns in total by August 2020, the second-largest number in the world, only slightly fewer than the US with 233 (Hurun, 2020). That makes China the largest market for unicorns in Asia. According to the report, the number of unicorns per city was led by Beijing which outperforms Silicon Valley in the US.

The number of startups within logistics services and transport solutions in China

E-commerce is a major reason why logistics innovations are big in China (Huang & Sharif, 2016). One reason why e-commerce is growing in China is that they have a well-developed payment infrastructure (Deloitte, 2019a). There is a movement in China towards more efficient, faster and more environmentally friendly transports, driving logistics innovation. Interviews mentioned cargo, warehouses and trains as active areas for innovation.

According to interviews, logistics services in China can be divided into two categories: express services and freight services. In express services, there are not as many opportunities as many large corporations are already involved and the market is highly consolidated. On the other hand, the freight service segment is highly fragmented, and the market is growing. For mobility, many interviewees mentioned suggested China had a lot of interesting startups and companies. One interviewee said that there were many innovative mobility business models in China.

The number of startups within electric mobility and infrastructure in China

Interviews point to China having a lot of activity in electric infrastructure and connectivity. This is an area of interest both to startups and to investors. Connectivity is an issue driven by the Chinese government. According to Mordor Intelligence (2021), China is the largest electric vehicle (EV) market (including buses) in the world. China also has the largest EV charging infrastructure. The demand for EVs is driven by factors like lowered battery costs and the government promoted the adoption of EVs. For example, many cities in China were targeted to shift to fully electric public transport until 2020.

The number of startups within site solutions in China

China has startups within most sectors, however slightly fewer within site solutions than logistics services and electric infrastructure. According to Business Sweden (2021), in 2020, the number of deals was around 10 for site solutions startups in China, compared to around 50 for logistics services and 80 for electric infrastructure.

5.2.2.2 The startup landscape in India

India's startup landscape has grown a lot and is now one of the largest in the world. However, critics say Indian startups are not always innovative and tend to be undifferentiated from the rest of the world, why they normally don't venture outside of India. Activity is higher in some sectors, for example, the logistics services sector. Regarding electric infrastructure, most development is for smaller vehicles. There currently does not seem to be many startups within site solutions, but of those, there could be some opportunity within construction. Due to this,

the number of unicorns and the number of startups within logistics services and transport solutions were deemed strongly beneficial for VGVC (dark green). Innovation activities of startups as well as the number of startups within electric mobility and infrastructure and the number of startups within site solutions were all deemed slightly beneficial for VGVC (yellow), see Table 8.

Innovation activities of startups in India

India's startup landscape has seen huge growth in the last decade, according to a report from Inc42 (2020). The country has gone from only having a few startups, to 2020 having 40 000 active startups. In the first half of 2014, the funding was only 1.2 billion USD, and this has grown to 5.2 billion USD in the first half of 2020. This is a view that has been shared by the interviewees as well as shown by the quote below.

“Last three days there were three unicorns. The ecosystem is flourishing with innovations, people collaborate in multiple ways and the capital pool is very, very massive.”

According to the Global Innovation Index for 2020 (WIPO, 2020), India is ranked as number 48 in the world at innovation. This could be compared to China, ranked as number 14 (Hong Kong is number 11), and Singapore, ranked as number 8. But with India's 50 000 startups it is now ranked as one of the largest startup economies in the world, and six of India's cities made it to the top 100 list of “most entrepreneurial cities”.

However, there are some contradictory views to this. Even though India is one of the biggest startup economies in the world, many of the startups fail in the first years (IBM, n.d.). IBM did a survey where venture capitalists gave some main reasons why Indian startups fail, the biggest being that Indian business models are undifferentiated. This means their ideas are not unique and instead replicas of other successful innovations. This makes it hard for startups to go beyond their local market and expand globally. Further, larger VCs and private equity funds have been very careful when it comes to which companies to invest in and focus mostly on firms that show a great track record in India (SIDBI, n.d.). This becomes a problem because it leads to less innovation; many of the startups are afraid to try new business models and instead stick with more safe options. However, according to BFP (2020a), Indian startups are increasingly targeting markets overseas. In 2019, 21% of the startups had focused on bringing their innovation to the global scene.

The number of unicorns in India

According to Mittal (2021), there has been significant growth in the number of unicorns in the last couple of years in India, confirming the view of the interviewees. In 2020 India produced 12 unicorns in total, while this number was almost reached already in April 2021, when India announced that 10 startups had reached the 1 billion USD threshold to be considered a unicorn. In total in 2020, India had 30 unicorns (Venture Matters, 2020)

The number of startups within logistics services and transport solutions in India

The general view from the interviews was that there was some activity of startups in Volvo Group's focus areas. Volvo Group has an active presence in India which includes factories and R&D centres. Many interviewees expressed that the logistics sector was the biggest of the three interest areas in India, partly because of the lacking infrastructure. One interviewee suggested that India was the country in Asia most relevant for logistics services.

“Logistics is a huge market for India. The reason for its growth is because they are lacking infrastructure like good roads, airports. There are a lot of startups to make good use of the infrastructure that is why the startups are there.”

Another interviewee described that India is developing a lot of technologies that focus on service offerings and “plug and play” technologies which mean products that could be combined with multiple solutions from different brands which is something the Indian market is asking for. One of the most funded sub-sectors in India is “software as a service”, and the deal size for the sector is tremendously increasing (Bain & Company, 2021). According to Business Sweden (2021), there are local startups driving innovation within the logistics services and transportation solution segment in India, and they have seen improvements in the Global Logistics Performance Ranking Index.

The number of startups within electric mobility and infrastructure in India

According to Business Sweden (2021), there are not as many startups within electric mobility and infrastructure as for logistics services in India. There are some local innovations happening within energy supply and vehicle supply, but fewer innovation within charging infrastructure. According to the interviews, the progress with electrification is primarily focused on two-wheelers and three-wheelers.

The interviewees pointed out that the Indian infrastructure is quite undeveloped, therefore electrification of trucks and buses are not prioritised. According to Business Insider India (2020), the Indian market for EV is predicted to become the fourth largest in the world, and startups are taking advantage of this opportunity; but most of the promising Indian startups within the EV field are focused on two-wheelers.

The number of startups within site solutions in India

According to Business Sweden (2021), India has some startups driving innovation within site solutions, but overall the maturity for the sector is low. The interviews supported this but also suggested that the opportunities within site solutions in India lies in the construction equipment as India is focusing on improving the country's infrastructure.

5.2.2.3 The startup landscape in Singapore

Singapore is a global innovation hub and is home to many headquarters. As a logistics centre, they have much technology development in that area, and they have five unicorns (CBInsights, 2021b). There is also some development in the electric infrastructure area. For site solutions, the sector is quite small but there may be some opportunities within construction. Innovation activities of startups, number of unicorns and number of startups within electric mobility and infrastructure were all deemed beneficial for VGVC (light green). Number of startups within logistics services and transport solutions was deemed strongly beneficial (dark green) and the number of startups within site solutions was deemed slightly beneficial (yellow), see Table 8.

Innovation activities of startups in Singapore

Singapore is one of the countries in the Asia Pacific region (APAC) that has shown huge growth in the technology sector and the startup market landscape is well developed (Capgemini, 2017). In a vast majority of the industries in the country, the development of new technologies has resulted in growing revenues and is a driver for why countries around the globe are starting to look into Singaporean businesses. Singapore has been ranked by the Global Financial Center Index, as one of the top financial centres in the APAC region. According to Capgemini (2017), the World Bank has described Singapore as a country where innovation is happening quickly, the costs for startups are low, politics are reinforcing policies for increased entrepreneurial activity and the labour force is strong. Singapore also has strong linkages with the rest of the APAC region according to interviews.

For startups, Singapore has developed conditions favouring entrepreneurs who want to build companies, such as favourable labour conditions for people starting companies and endowment for startups (PwC, 2015). One interviewee said, “Singapore has very flexible regulators which embrace new technologies and allow startups to try new things in the city.” Furthermore, Singapore is a good starting country in Asia for foreign companies, one reason being to evaluate whether the business idea is applicable in the rest of Asia (Capgemini, 2017). This is something many of the interviewees agreed with. One interview also emphasised the small size of Singapore, but that there are a lot of headquarters.

The number of unicorns in Singapore

Singapore is home to five unicorns (CBInsights, 2021b) as of 2021 and the leader of most unicorns in Southeast Asia.

The number of startups within logistics services and transport solutions in Singapore

Logistics services is the most common area for startups in SEA (Business Sweden, 2021). This view was shared by many interviewees, suggesting that Singapore is “big in logistics”, partly due to their huge port. One interviewee says “logistics is one of the most promising sectors in the region. In that industry, there should be many possible partnerships”. Interviewees also suggested that transportation and urbanisation is a major trend in Singapore.

In a report from Deloitte (2019b) SEA is described as having a boom in the logistics sector and is receiving more attention from the rest of the world. Many successful startups are appearing in the region. One example the report brings up is Haulio, a company optimising the container-moving fleet, matching supply with demand. A common theme among the startups in logistics is efforts in improving the whole supply chain analytics and focusing on getting real-time data for each step in the supply chain.

The number of startups within electric mobility and infrastructure in Singapore

The opportunities within the electrical infrastructure are overall good in Singapore, but not as good as in the logistics sector (Business Sweden, 2021). Interviewees argue there are opportunities within electric infrastructure in SEA. The Singaporean government has enforced some policies to strengthen the electric vehicle infrastructure and Deal Street Asia (2020) argues that this will enable more electric infrastructure startups in the SEA region. One of the interviewees mentioned that development needs to happen in Singapore and SEA as the demand for electric vehicles is growing and not being met by the supply. Many of the countries are also pushing for local innovations, for example in local production of the vehicles, which creates demand for local startups within electric mobility.

The number of startups within site solutions in Singapore

According to Business Sweden (2021), site solutions is the smallest market out of Volvo Group's interest areas. There are some innovation activities in this field in Singapore, but one can expect to find more in other areas. The interviewees suggested that there might be some startups within site solutions due to the large port, but not very many.

5.2.3 The VC landscape

There are some general downsides most foreign VCs face when investing outside their country of origin according to Joshi (2018) as they are less knowledgeable about the institutions in place. There is also the issue of not being as well connected in the social networks as the domestic VC. This is an issue seeing as VC, according to interviews, mainly is a social industry. For VCs to consider investments in a foreign country, a common requirement is that the market size of venture capital is relatively large and that there is an active VC market. An overview of the total market size of the venture capital market in China, India and Singapore is given in Figure 2.

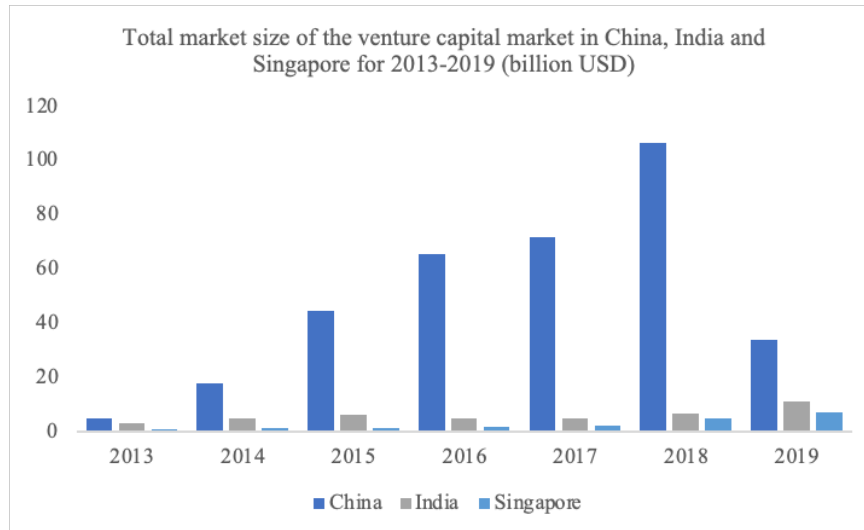


Figure 2. An overview of the total market size of the venture capital market in China, India and Singapore for 2013-2019 (Preqin, 2019; Bain & Company, 2021; KPMG, 2021; KPMG, 2020a; KPMG, 2020b; KPMG, 2020c; Vertex, 2021)

To determine how favourable the VC landscape is in China, India and Singapore four criteria were found to be most critical for success: The size of the VC market, which regulations regarding venture capital the government has put into place and how they are supporting foreign investors, the numbers of foreign VCs present and the speed and size of the investment rounds. The result and scoring for the countries are presented in Table 9.

Table 9. Identified criteria for an advantageous VC landscape and how favourable China, India, Japan are for each criterion.

Theme	Criteria	Assessment by country		
		China	India	Singapore
VC landscape	VC market size	Strongly beneficial - Large market size 45 billion USD in 2019	Beneficial - Medium market size 11.1 billion USD in 2019	Beneficial - Medium market size 8.6 billion USD in 2019
	Government regulations and support for foreign investors	Slightly beneficial - Primarily encouraging strategic foreign investments - Many regulations for foreign investors	Slightly beneficial - Open and positive to international investors - Regulations differ locally and hard to predict	Strongly beneficial - Government actively promotes foreign investors - Robust and transparent legal system
	Number of foreign VCs	Slightly beneficial - Few foreign VCs - Large domestic investors e.g., Tencent and Alibaba	Beneficial - Many foreign VCs - Majority of funds originates abroad	Beneficial - Many foreign VCs - Early stages dominated by domestic VCs
	Investment rounds: speed and size	Beneficial Large and quick rounds	Beneficial Large and quick rounds	Strongly beneficial Speed and size more like the West but increasing at a fast pace

5.2.3.1 The VC landscape in China

The venture capital market in China is the second-largest in the world after the US (Zinser, 2021). There are still certain restrictions regarding foreign investments, but China has opened up more and more in the past few years. There are not many foreign investors, and domestic corporate investors like Tencent and Alibaba are very active. In China, the round speed and size have increased significantly in recent years. Due to this, the VC market size was deemed strongly beneficial for VGVC (dark green), the government regulations and support of foreign investments and number of foreign VCs were deemed slightly beneficial (yellow), and investment rounds: speed and size was deemed beneficial (light green), see Table 9.

The VC market size in China

The VC market size in China is according to BFP (2020b) experiencing a shift from rapid growth to more mature growth. This phenomenon could be seen when looking at Figure 2, investments in China have been declining after 2018 and the total VC market size in China was approximately 45 billion USD in 2019 (KPMG, 2020a; KPMG, 2020b; KPMG, 2020c; KPMG, 2021), but according to Zinser (2021) the investments will start to go up in 2021.

One major group of actors in the Chinese venture capital market brought to our attention by several interviews are the Chinese CVCs, in particular the largest technology companies in the country: Alibaba and Tencent. Interviewees argued that these and other Chinese conglomerates are responsible for a lot of the investments. Interviewees emphasised the impact that these corporate investors have on the market. One claimed that whenever they spot a popular and competitive deal “Tencent is always there”. Another phenomenon following this is that the market is saturated with domestic Chinese capital, largely from these corporate investors. The quote below illustrates this.

“Sometimes when we are looking at a deal, the company tells us: Tencent is here so we don’t want your money.”

This is supported by a report from INSEAD (2018), which claims that Alibaba and Tencent are very active on the market and have made investments in the hundreds since the mid-2010s. Something setting these companies apart according to interviews and Netherlands Worldwide (n.d.b) is the close to never-ending capital resources they possess making it possible to continuously invest without too much concern to the financial impact if the startup fails. The way these companies invest is in line with the Chinese government’s agenda for innovation and entrepreneurship. According to IIF (2018) Tencent and Alibaba both form conglomerates, thriving in supporting policies together with a very large market and plenty of capital, and in effect, they are almost active in some capacity in every sector of the Chinese economy.

Government regulations and support for foreign investors in China

Interviews suggested that the Chinese government approves of and are open to foreign corporate investments, however, not as much to foreign institutional investments.

Manufacturing companies can enjoy benefits from the government in order to invest in China. In 2020, a law was passed in China to stimulate and safeguard international investments (Deloitte, 2020). However, interviewees suggested that investing in China might not be as transparent and easy as investing in other Asian countries. For example, foreign investors are not allowed to invest in all sectors. These sectors where foreign investment is restricted are described on a so-called negative list. However, for sectors outside of this list, foreign investors will be treated the same as domestic investors according to this new legislation. In recent years, there have been many tax policies introduced that encourage and promote foreign investment, such as the removal of double international taxation (Deloitte, 2020).

Furthermore, there is a difference in mindset between China and the West when doing business, which can hinder western investors from succeeding in China. In China the rewards are significant, but so are the risks. According to interviews, in China, especially in sectors like the internet, many startups are considered to need to burn through a lot of money in order to grow. It is acceptable that the startups take big losses for several years. Many western investors are not comfortable with this and desire more stable finances, which is why they risk losing out on good deals. Some interviewees also raised the point that it might be easier for Chinese startups to accept investments from domestic investors.

This is supported by a report from McKinsey & Company (2019) that suggests that Chinese startups more often raise money domestically. However, some interviewees instead suggested that startups don't make a difference between foreign or domestic investors and instead look at the quality of the operating team.

Something that needs to be considered when working with technology innovations in any capacity is intellectual property rights, IP. IP assets are essential for the startup's growth potential, performance and valuation (Uzuegbunam et al., 2019). Anderson et al. (2017) argue that in China, political ties help companies with IP protection. In emerging economies like China, innovation activities for companies are risky. Due to the external nature of innovation activities in China, there is a prevalent risk of copying. (Tian et al., 2019). One interviewee said "There is a significant danger of the Chinese stealing the technology when working with them. If they hear an idea, they have huge resources building and realizing this idea."

A law was passed in 2020 that prohibits forced technological transfer, which in essence is the government forcing foreign companies to share their technology to benefit domestic actors (OECD, 2019), something that before has been of significant concern to investors (Deloitte, 2020). IP rights are something businesses, in general, should consider when operating in China, and something investors must consider when collaborating with startups in any capacity. The nature of the knowledge exchange of corporate venture capital would leave both the investor and the startup vulnerable to IP infringement. This is however something that has to be weighed against the large size of the market. One interviewee expressed that for many companies the risk of IP infringement is worth it due to the size of the market.

“In China, they can earn really big money, and they don’t care if the IP can be copied because they still can get a good enough piece of the business cake.”

One risk pointed out in interviews is the one of corporate social responsibility, CSR. Dai et al. (2019) describe CSR as the pursuit of sustainability and welfare taking into account all stakeholders of a company. According to Grant (2018), enabling CSR is of the company’s interest for sustainability, reputation and permission from relevant institutions to operate. According to interviews, there is a higher CSR risk in China, than in the West.

The number of foreign VCs in China

However, no matter the stimulation measures, interviews suggested that there are not that many international VCs and CVCs operating in China. One interviewee suggested that this is due to the Chinese VC being very strong at the moment. Another said that the VC market in China is very dependent on domestic VCs.

Even so, the investment dynamics in China are changing. According to Daxue Consulting (2018) in 2018, 30% of investments in startups in China in 2018 were made by foreign investors. An interviewee suggested that there is a positive trend of foreign investments in China, partly since domestic funds are being set up and growing internationally.

Investment rounds in China: speed and size

Interviews suggested that the round size is very large in China and growing. This is supported by data from Crunchbase (2018) stating that early-stage funding deals in China are much larger than those in the US. According to interviews, this can be explained by the fact that in China, startups use capital to create a clear path forward. Instead of waiting on a value chain to adjust, in China, the startup will create its own supply chain. They do it all, that way they don’t have to wait for anyone and are not left vulnerable to the actions of others in the network. One interviewee said that “speed trumps capital intensity in China, people want to go fast no matter the cost.”

Another aspect correlated to round size is the speed of the round. Interviews suggest the speed is very fast in China, fundraising only takes a few months and if an investor wants to join, there is only about one month for deliberation. This can be difficult for CVCs if they don’t have complete freedom to invest independently from the company’s main business. Interviewees also suggested that it might be difficult for foreign investors as well to keep up with that speed. Another interviewee claims there is so much capital available, the startups are free to select their investor as they wish. How fast the rounds actually can go is expressed by China Money Network (2021) as "you don’t have time to do due diligence, whoever sends the money first will get the chance to invest".

No matter how fast the market is moving, one interviewee gave advice regarding investments and collaboration. Seeing that collaborating will expose both parts to a certain extent, and bind

the two structures together for a long time, at least several years, one interviewee urged for caution.

“Any entrepreneur who raises capital needs to make decisions slowly. A lot of people in China make this decision too quickly. It’s like getting married to someone you barely know.”

5.2.3.2 The VC landscape in India

The VC market in India has been steadily growing in recent years. Regulations can be hard to predict and differ around the country. There are many foreign investors, in fact, most of the venture capital invested in India is of foreign origin. Round speed and size have largely increased in India during recent years. Due to this, all criteria of this theme, except for government support and regulation which was judged slightly beneficial (yellow), were judged beneficial for VGVC (light green), see Table 9.

The VC market size in India

The size of the VC market in India has seen a growth in the past years, according to Bain & Company (2021) the total VC market size in India 2019 was 11.1 billion USD and is expected to keep growing. See Figure 2, “The VC landscape”, for visualisation of the VC market size in India.

Regulations, support and acceptance of foreign investors in India

Opposed to the downsides of being a foreign investor mentioned by Joshi (2018) as information asymmetry regarding the country’s institutions, there is in India the upside of foreign investors, in general, being more knowledgeable regarding investing in high technology. After the recession in the West of 2008/2009, many VCs were pushed towards emerging economies such as India. At the same time, there was an increase in demand for VC seeing as interest rates were high, so the entrepreneurs were seeking capital elsewhere.

Many interviews suggest India is open and positive to international investors, more so than China. For example, in India, the VC market is largely dependent on international investors, as opposed to China. In India, domestic investors are “sharing the investment space with the international investors.” However, domestic VCs are, according to interviews, growing largely due to the overall growth of the VC market, but still not meeting the size of international investors.

According to interviews, the VC landscape is collaborative and there are few VCs in India that don’t collaborate with global limited partners. One interview expressed that the structure of funds in India is mostly just collaboration with global limited partners, and they invest the most money, though there are some Indian LPs as well.

The Indian government has according to interviews introduced multiple measures to attract foreign investors and support the VC industry. Interviewees suggest that the last 5-7 years, the

government has been pushing a lot for investments and given support to the VC market. For example, the maximum percentage of an investment that can be foreign has been raised to promote foreign direct investments. One interviewee mentioned that the checklist needed to start a fund has been streamlined and made more robust. Yet another measure mentioned by an interviewee was the establishing of the GIFT City, an international financial centre in India, intended to be similar to Singapore, which however according to Mint (2021) have not been very successful compared to its objectives.

According to WIPO in their 2020 report regarding their Global Innovation Index, India's vibrant startup landscape has formed largely despite insufficient innovation infrastructure and public R&D grants. There are however measures being taken to promote VC and innovation. The IPO regulations are largely followed and rather robust according to WIPO (2020), something that was not agreed on by interviews that stated that globally IPO rights in India are not great. WIPO (2020) further states that the regulations for foreign investors can be improved, including making policies more clear and more possible to enforce, and that would encourage more investors.

There are several regulations that foreign investors must follow. According to MUDS (2019), foreign investors have to register with the Securities Exchange Board of India (SEBI). If the investor wishes, they can register as an FVCI, foreign venture capital investor, and enjoy some exemptions from regulations, such as norms for entry and exit. India did, according to the United Nations Conference on Development and Trade (UNCTAD, 2016), in 2016 further, relax foreign investment policies and stated foreign investors no longer had to get permission from the Reserve Bank of India to invest in India, no matter the sector. Up until recently, policies were being relaxed for foreign investors. However, in the light of the COVID-19 pandemic, rules were changed for countries sharing a border with India, including China, and foreign investors from these countries now need government approval before investing. According to KWM (2020), these policy changes are said to be temporary during the pandemic, however, there is no time limit set so they will remain in place until modified.

The number of foreign VCs in India

Interviews suggest there is a strong demand for foreign VC in India. This is supported by Joshi et al. (2019) who suggest 80% of the money raised for Indian funds originates abroad. 70 % of VCs are or were originally foreign. WIPO (2020) states that there are over 220 foreign investors in India in 2020. According to Joshi et al., foreign VCs are important for the local market as they bring opportunities and know-how for expanding abroad, as well as knowledge about building a business. Multiple multinational companies have set up a presence in India as corporate venture arms or business accelerators.

However, despite the large international presence, there are some conflicting views of the ease for international investors to invest in India. Joshi et al. (2019) suggest that due to lagging legal systems in the light of a quick-moving VC industry, formal contracts are hard to enforce. The report from SIDBI (n.d.) also brings up a contrary view to the strong foreign presence: the

number of international LPs that are willing to invest in India is low. The report points out the continuous change in regulatory structures as the main reason for this. For example, Chinese VC investments were banned in India following border conflicts between the countries (Zinser, 2021).

Similar to other countries in Asia, India has powerful conglomerates. In India, there are five major conglomerates, including Tata and Reliance. According to one interviewee, a business needs to be in contact with these conglomerates before entering the Indian market. The interviewee noted that these conglomerates “will either be your customer or partner”.

These conglomerates are performing well; their owned companies performed better than all companies outside of conglomerates on a domestic stock exchange for over 20 years according to Ramachandran et al. (2013). One reason for this, they argue, is that the conglomerate companies have via the conglomerates receive more opportunities for business than non-conglomerate companies do. This in combination with the business nature of long relationships as those typical for high context societies, meaning the group has a good understanding of their employees and capabilities and thus can exploit them in the most effective way, means the conglomerates continue to perform well while diversifying, a pattern that is not seen in the West.

Investment rounds in India: speed and size

According to interviews, the fundraising speed has picked up a lot in the last few years in India. One interviewee said that “the speed of the deals has gone crazy ahead of what it was two years ago”. Another said that “now, I am working with two deals a week, it used to be two deals a month”. Interviewees argue that the fund raising takes around one month, and that the ecosystem can work with that type of timeline.

Interviewees also suggested that the average deal size has increased significantly. One interviewee said that seed investments before typically were around 200 thousand USD, however, by now seed investments are around 1 million USD. This is supported by Mittal & Sha (2021) who argues that deal sizes are growing. Further the authors of the paper describe how Indian startups are receiving more capital than originally needed and having to decline investments. Rounds complete and close in a quicker timeframe than ever before, and the average ticket size has increased. More stage-specific funds are being established and it is getting easier to get early-stage funding as interest increases.

5.2.3.3 The VC landscape in Singapore

Singapore has quite a large and very foreign-friendly VC market. There are many international actors, however mostly in the later stages, and the Singaporean government is actively promoting foreign investments. The speed and the size of investment rounds have increased significantly in recent years. Based on this, the VC market size and number of foreign VCs were judged to be beneficial for VGVC (light green). The government regulations and support

for foreign investors, and investment rounds: speed and size were judged to be strongly beneficial (dark green), see Table 9.

The VC market size in Singapore

According to Vertex (2021), the development of the VC market in Singapore and the rest of SEA has been favourable and in 2019 the investment amount in Singapore was 8.6 billion USD, see Figure 2 for visualisation of Singapore's market size. Figure 3 illustrates the proportion of the volume of investments in Singapore and the largest other VC markets in SEA.

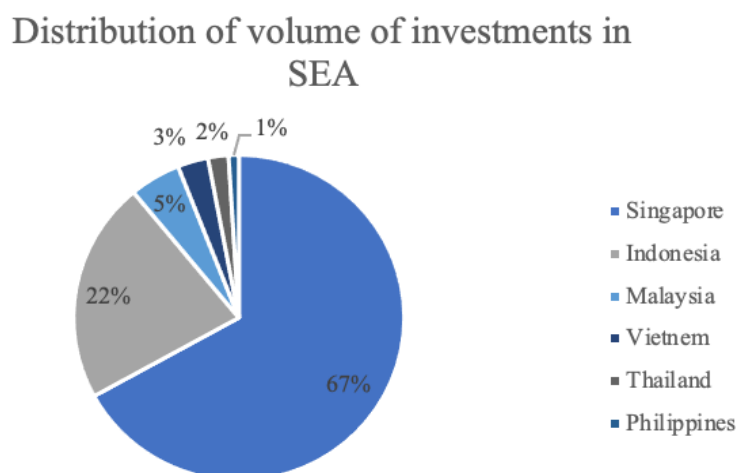


Figure 3. Distribution of the investments in the Southeast Asian region between 2010-2017. Adopted from Preqin (2018).

Regulations, support and acceptance of foreign investors in Singapore

A common view is that the Singaporean government has been good at promoting Singapore as a fund-manager hub for Asia. They have created a simple, straightforward regulatory scheme, which is easy to use and understand for fund managers. One interviewee suggested the Singaporean venture capital industry is similar to that of UK, Hong Kong and to some degree the US. As Singapore has inherited some laws from the UK, investment deals share some similarities between the countries. Singapore has, similar to the UK, standardised fund management papers in order to streamline the process for investors. One interviewee said that “the legal jurisdiction is similar to Stockholm” and “the market is transparent”.

“Singapore has done the most to attract foreign investors. It is a safe country with a good banking system, and they have good legislation. Singapore can be said to have overtaken this role from Hong Kong.”

Another measure that the Singaporean government has taken in order to promote Singapore as a good place for investors is a series of tax exemptions for fund managers. One interviewee explained that fund managers do not need to pay corporate income tax. The government is

hoping that this initiative will help the startup ecosystem in Singapore to grow and evolve, and hopefully attract more foreign VCs. According to Deloitte (2021c), Singapore is the preferred base for fund vehicles for investment in the APAC region. The two main reasons are the ease of doing business in Singapore together and the beneficial tax scheme. For venture capital fund managers, the Monetary Authority of Singapore (MAS) has set up a new regime for Venture Capital Fund Managers, which is meant to ease the process where VC Managers apply for authorization. The capital requirements for the fund managers have also become smaller.

Furthermore, Singapore has rolled out a new type of company called a variable capital company (VCC), that fund managers can set up. According to PwC (2020b), the introduction of the VCCs in Singapore may be a game-changer for the industry. The VCC is a new type of structure for funds, that allows investors to use Singapore's tax benefits for investments across borders. A VCC, is according to interviews a special Singaporean phenomenon that is designed to facilitate fund manager activities as it "offers what Cayman Island LP can offer, but in a transparent jurisdiction and more well-received among the global investment space".

According to interviews, tax benefits and tax exemptions are generous both for international and domestic VCs. The VCC could either be made up of one fund or multiple ones, a so-called umbrella fund that incorporates sub-funds. This allows Singapore to offer a safe way of investing, where everything is transparent and flexible. Further, Margulies-Snyderman (2020), describes that VCC has driven a lot of foreign interest to Singapore as a hub for setting up funds. More queries are coming from the U.S and Europe who work with Asian investors and want to set up a VCC.

The number of foreign VCs in Singapore

Singapore has, according to interviews, seen a rise in international investors over the last couple of years. In 2019, according to PwC (2019), nine of the ten largest deals in Singapore were made by foreign investors. In the same year, foreign investments dominated the fintech sector in Southeast Asia, 75% of the total capital came from international VCs.

Many international investors in the Asian region have set up an office in Singapore. According to interviews, the division between local and international VCs also depends on which stage the VCs typically invest in. In the earliest stages of VC investment, for example seed stage, the rounds are dominated by domestic players. Meanwhile, in the later stages the division was more equal, almost a 50/50 split between international and domestic VCs.

Investment rounds in Singapore: speed and size

According to interviews, round size is growing rapidly, and round speed is increasing quickly, both in Singapore and the rest of SEA, however, it is not at Chinese levels. One interviewee suggested that in 2015, the average deal was around 2 million USD, however, now in 2021, the average deal size has grown to 13.5 million USD. Another interviewee said that "the scene in SEA has changed dramatically, now there is record fundraising." This is supported by Nikkei

Asia (2020) who claims that investment in the Southeast Asian region has continued to grow at a fast pace, even though the global pandemic has limited the deal flow.

5.2.4 Fund collaboration opportunities

There are several ways in which a fund investment can achieve the strategic aspect of investing. This would mean any return from the fund that is non-financial and, in any way, supports the objectives of either the company investing or the company receiving the investment. For corporate venture capital, this strategic aspect in investing is often essential and the opportunity for exchange is central to their investment strategy. The most common strategic opportunity in all three countries raised in interviews is the co-investment function. According to interviews, this can become plausible when the limited partner, in this case, the CVC, is a substantial investor in a particular fund and owns a certain percentage.

To determine the fund collaboration opportunities in China, India and Singapore four criteria were found to be most critical for success: The access to suitable funds, how much strategic services are provided to limited partners, the ease of getting information from the startups and the number of investments in adjacent countries. The result and scoring for the countries are presented in Table 10.

Table 10. Identified criteria for fund collaboration opportunities and how beneficial the criteria are in China, India, Japan

Theme	Criteria	Assessment by country		
		China	India	Singapore
Fund collaboration opportunities	Access to suitable funds	- Many funds but most are purely financially driven - Somewhat complicated fund structure	- Indian VCs are open to international collaboration - Fewer funds but with an increasing strategic focus	- Many suitable and many international funds - VCs are collaborative and flexible
	Strategic services provided to limited partners	Often no additional services given to LPs	Some additional services given to LPs e.g., through co-investments	- VCs often provide strategic services to LPs - Many offer co-investment opportunities
	Ease of getting information from the startups	- Somewhat hard to get information from startups - Hard to get a hold of IP	Startups are open to foreign strategic involvement	Fairly easy to get information from startups (except confidential information)
	Number of investments in adjacent countries	- Chinese VCs invest a lot overseas - Might be complicated to reach other countries from China	- Indian VCs rarely invest abroad - Indian funds could be set up overseas to avoid taxes and compliance	- Singaporean VCs invest some overseas - Easy to reach rest of SEA, China and India more difficult

Strongly beneficial
 Beneficial
 Slightly beneficial
 Unbeneficial

5.2.4.1 Fund collaboration opportunities in China

In China, most funds have more of a financial focus rather than a strategic focus and the domestic corporate venture capitalists are very active. Getting information from startups can be difficult. Chinese investors are very active overseas. Due to this, access to suitable funds and the number of investments in adjacent countries were deemed to be beneficial for VGVC (light green). The strategic services provided to limited partners as well as the ease of getting information from startups is judged to be slightly beneficial (yellow), see Table 10.

Access to suitable funds in China

Funds in China are, according to interviews, set up quite differently than those of neighbouring countries. Some indicated the structure is much more complicated, and the ecosystem surrounding it is different from those around China. Traditionally, foreign investments have been made in funds based on USD, however, due to the condition for listing domestically being that the fund is raised in the Chinese currency RMB, many foreign investors are now considering establishing RMB funds according to Daxue Consulting (2020).

According to interviews, investing in funds in China can be done in two ways. One option is purely financially meaning that the investor will not have an operative role. The other option is to invest as a limited partner where the investor will take place on a committee making decisions for investments. Something raised by multiple interviewees is the fact that in China, purely financial funds dominate. One interviewee said, “one problem with investing with Chinese funds for corporate investors is that they are purely financially driven”.

Strategic services provided to limited partners in China

Expressed in a different way, a purely financial fund means that there are no additional elements of service, the only service the investor can expect from the fund is a good return on the investment. One interviewee claims this is a problem commonly seen with European corporations, as the Chinese fund will only service the Chinese branch of the company without any contact with the European headquarters.

However, according to interviews, there are strategic actors in China as well. One interviewee claimed that the majority of strategic investors in China are large corporate investors such as Tencent. The most common way to strategically collaborate in China, according to interviews, is the co-investment opportunity.

Ease of getting information from the startups in China

The strategic aspect in investing consists of exchanging information. Therefore, a possible hindrance to strategic investments would be what kind of information is allowed to be shared to foreign investors. Interviews here say different things. One interviewee believed that there are not any regulations in particular to what the startup might share with investors. Others claimed that a major obstacle when strategically investing in China is the fact that the investor will never get a hold of the IP. This can be correlated to what is mentioned in the above chapter about the VC market in China, the fact that China, according to interviews, is an “aggressive” innovator and wants to internalize IP.

Number of investments in adjacent countries in China

Another aspect to consider when investing in funds is the reach of the fund. Does the fund only invest domestically, or does it also find deals abroad? According to interviews, many international investors choose to invest in international funds that only invest locally in China.

There are however differing views on whether by investing in China, investors could also effectively reach other countries via the fund. Some interviewees claimed that it would be difficult to reach other countries by investing in China. This is due to the local nature of venture capital, where the deal flow decides the quality of the VC. In order to create a valuable deal flow, the VC must have local people with extensive connections to the startup network. On the other hand, some interviewees suggest it is possible to reach other countries by investing in China, although it would be more difficult. There are for example some funds especially focused on overseas investments, for example one of Tencent. According to Zinser (2021) and Netherlands Worldwide (n.d.b), Chinese VCs account for 40 % of all global investments.

“There used to be some deals between China and India, but as the relationship between these two countries had some turbulence, it is not good now. India has banned apps in China. When these kinds of dynamics exist, the deals are not easy to do.”

Interviewees claimed that there used to be deals between China and India, but recently, the relationship between the two countries have had some turbulence. Further, one interviewee said that India has banned apps in China, and “when these kinds of dynamics exist, the deals are not easy to do”. This is supported by Zinser (2021), who says that in the first half of 2020, Chinese VCs made significant investments in India, funding 18/30 Indian unicorns, with 4 billion USD across 90 deals. However, in July 2020, Chinese venture capital was largely banned in India due to conflict in the Himalayas region. Due to this, Chinese investment in Southeast Asia is due to increase significantly.

5.2.4.2 Fund collaboration opportunities in India

In India there are some funds specialising in specific areas, and most funds are very open to collaboration with international limited partners. Funds are increasingly offering strategic services. There is mixed information regarding the ease of working with startups. Finally, not many Indian funds invest overseas. For this reason, access to suitable funds is deemed slightly beneficial for VGVC (yellow). Strategic services provided to limited partners and ease of getting information from startups were deemed beneficial (light green), and number of investments in adjacent countries is deemed unbeneficial (orange), see Table 10.

Access to suitable funds in India

The funds in India do not merely have a financial objective, there has been a move towards more strategic investment and the general partners are usually highly active in the portfolio companies according to the interviews. A common view among the interviewees is that it is pretty easy to find collaboration partners within the VC industry in India. One interviewee said “the whole VC ecosystem is pretty collaborative”. Most VCs will see the benefit of having an international investor with them, expressed by one interviewee as “They understand what value is being brought to the table”. If the investors are of the strategic kind, such as Volvo Group, they also see benefits in terms of help with “next level” product/market testing, which might help them evaluate startups better.

Another finding from the interviews is that it is hard to find investments that only focus on one industry in India. Typically funds only try to capture technology companies that are growing at a fast pace. There are some exceptions for this, for example, funds that only focus on electric vehicles. One interviewee said in regards to Volvo Group's areas of interest that "you can probably count them on fingers in terms of the number of companies that are interested in that particular sector".

Strategic services provided to limited partners in India

Further, some co-investment opportunities can arise for corporates that invest in funds if the startups are of interest to them, according to interviews. This usually happens in the later stages, when the company has progressed. One interviewee recommended initiating partnerships with funds who have an understanding of the technologies that Volvo Group are interested in and co-invest with them in the later stages. But generally, according to the interviewees limited partners are usually only involved with the assets and not so much with the strategic decision making, for example, which sectors to invest in.

Ease of getting information from the startups in India

The information you are able to get out of the startups from the funds may vary, according to interviews. However, overall, the interviewees thought that it would be pretty easy to get information from the startups because the companies and other actors in the venture capital are usually quite open to sharing. This however is somewhat opposed by Joshi et al. (2019) who claim that in India, entrepreneurs commonly view VC as solely a financing function and reject input or collaboration regarding the strategies and operations of the startup. Furthermore, it was also suggested that there is a significant lack of trust between VCs and entrepreneurs in India, in particular for early-stage businesses.

Number of investments in adjacent countries in India

Regarding whether or not you could reach other countries in the Asia Pacific region from India, the answer from the interviews is that it is hard. Mostly the Indian VCs invest in local companies in India. Sometimes funds meant for Indian startups are set up in other jurisdictions, close to India, to avoid Indian taxes and compliance (Corporate Services, 2019).

5.2.4.3 Fund collaboration opportunities in Singapore

In Singapore, there are many international actors, and many funds have strategic services provided. There are usually no issues in exchanging information with startups, and from Singapore, it is quite easy to invest in the rest of SEA, as well as it being a good hub in between India and China. For this reason, access to suitable funds, strategic services provided to limited partners and ease of getting information from startups is judged to be strongly beneficial for VGVC (dark green). The number of investments in adjacent countries is judged to be beneficial (light green), see Table 10.

Access to suitable funds in Singapore

Likewise, as in China, there are two types of ways of investing in funds in Singapore as well. One is purely financial, while the other one is strategic. According to interviews, the funds in Singapore are usually focused on a type of technology such as AI rather than an industry, but both kinds exist. Most interviewees expressed that there is no specific downside to being an international investor in the funds, and that the general partners don't usually have a preference between international and domestic investors. Interviews also suggested that it is easy to find collaboration partners and that most GPs are willing to discuss the terms in the LPA before the investments are initiated.

One thing that often was brought up in the interviews is that even though the funds are not investing in the particular industry of interest, it is possible to approach the GP and look at deals together. Something to be aware of is that this needs to be stated in the LPA agreement. If it is not and the fund is already up and running the LP cannot control it. But, if you are a strategic investor, you can write in the agreement that the fund may only invest in things that have a strategic value for Volvo Group according to interviews.

Strategic services provided to limited partners in Singapore

Interviewees suggested that in general, VCs provide several strategic services to their limited partners. The most common strategic service offered is the co-investment opportunity, which will be offered if the LP is a substantial investor. In general, most strategic services have to be written into the LPA. One example of a strategic service mentioned in the interviews was the opportunity to co-innovate. This was a type of event offered by one VC, where corporate limited partners and startups can meet and discuss the problem statements and needs of the corporations, to which the startups can prepare solutions and innovations.

Ease of getting information from the startups in Singapore

Fund collaborations could be used for limited partners to get information from the startups that the funds invest in. In Singapore, most of the interviewees had a similar view on much information that was possible to get from the startups which is that it is fairly easy to directly receive information from the startups, but some details will be more guarded than others, such as confidential information. This can be illustrated with the quote below.

“There are never any issues at the workshops, about startups sharing information. With founders typically there is no problem.”

However, one interviewee raised the issue with sharing data when a corporate investor interested in a specific field invests in two competing startups. The startup might want to hold onto the details and not disclose their trade secret or confidential information regarding their invention, to avoid investors using their invention. But overall Singapore has a good protection system for intellectual property. According to the International Property Rights index (Levy-

Carciente, 2020) Singapore has one of the best systems for intellectual property protection in the world and was ranked third in 2020.

Number of investments in adjacent countries in Singapore

The overall response from interviewees is that it is very easy to cover SEA from Singapore. One expressed it as “most of the regional VCs in Singapore cover SEA”. Regarding whether or not you can reach China and India from Singapore, the answers have been mixed. One interviewee mentioned that because of Singapore’s status as a hub and geographical position, it would be fairly easy to invest in the rest of Asia from Singapore. Another interviewee was more sceptical about the reach to China and India. It was suggested that to invest in India and China from Singapore, the best way would be to set up a local office there.

5.2.5 Ease of doing exits

A well-functioning exit system is a prerequisite for healthy venture capital markets. Exits can be done in many forms and depend on a number of factors. Many interviews emphasised that exits work in different ways depending on location, and exits in Asia may differ a lot from exits in the West. The most common exit forms are mergers and acquisitions (M&A) and initial public offering (IPO). How the exit is done will decide the return on the investment. In general, IPOs gain investors a significantly higher return than M&As. The number of exits could be used as a good indicator for the performance of the venture capital industry in the given country according to the interviewers. The total number of exits in China, India and Singapore from 2015 to 2018 can be viewed in Figure 4.

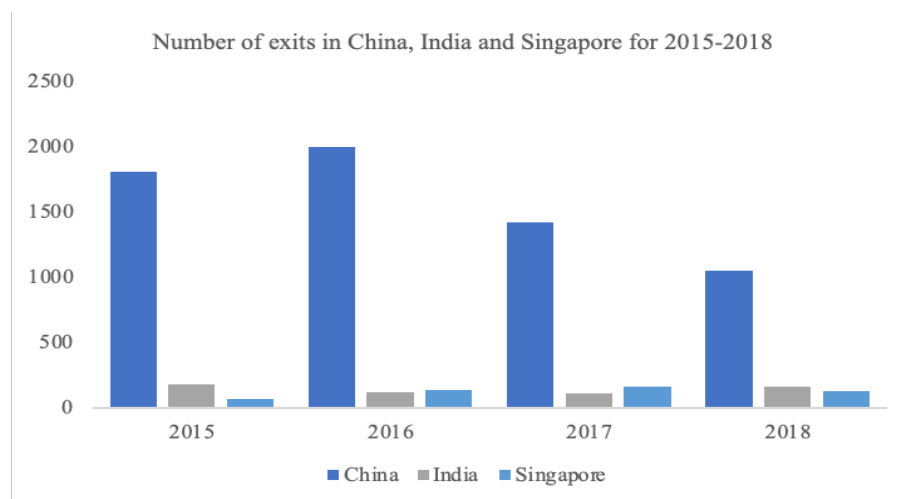


Figure 4. An overview of the total number of exits by venture capital firms in China, India and Singapore for 2015-2018 (Golden Gates Ventures & INSEAD, 2019; Bain & Company, 2021)

To determine the ease of doing exits in China, India and Singapore four criteria were found to be most critical to assess: The number of exits, ease of doing an M&A, ease of doing an IPO

and the maturity of the domestic stock market. The result and scoring for the countries are presented in Table 11.

Table 11. Identified criteria for ease of doing an exit and how beneficial the criteria are in China, India, Japan

Theme	Criteria	Assessment by country		
		China	India	Singapore
Ease of doing an exit	Number of exits	- Large number of exits 1050 exits in 2018	- Medium number of exits 170 exits in 2018	- Medium number of exits 131 exits in 2018
	Ease of doing an M&A	- Foreign investors often exit through an M&A - Need for political ties for a successful exit	- Lack of suitable purchasing companies - Hard to understand regulations	- Lack of suitable purchasing companies, leading to low valuations - Straightforward regulations
	Ease of doing an IPO	- Complicated regulations related to foreign investors - Need for political ties to get a good deal	- Strict requirements for listing and complicated regulations - More likely for foreign VCs to exit via IPOs than domestic VCs	- Strict requirements for listing - Expected increase in IPOs overall - SPACs are becoming more popular
	Maturity of the domestic stock market	- Mature, high IPO activity on Chinese stock exchanges - Ranked 2 and 3 in the world (volume of funds)	- Ranked as number 9 in the world (number of IPOs) - Significant liquidity in the stock market - Consist of many tech companies	- Low activity and few companies list there - Companies usually list overseas

Strongly beneficial
 Beneficial
 Slightly beneficial
 Unbeneficial

5.2.5.1 Ease of doing exits in China

The most common mode of exit in China is M&A, followed by IPO. There can be some difficulties for foreign investors exiting via IPOs, as for example foreign ownership in listed companies in some cases is not allowed. Furthermore, in China, political ties have been connected to successful exits, both for M&As and IPOs. For this reason, the number of exits and the maturity of the domestic stock market was deemed strongly beneficial for VGVC (dark green). Ease of doing an M&A and ease of doing an IPO were both deemed slightly beneficial (yellow), see Table 11.

Number of exits in China

In 2018, the number of exits in China was 1050. This was a decline from 2015 when the corresponding number was 1813, as illustrated in Figure 4 (Golden Gates Ventures & INSEAD, 2019).

Ease of doing an M&A in China

In China, according to most interviews, the IPO exit is the most common type used, rather than M&A. In 2019 Chinese VC companies primarily exited through IPOs, 75%, whereas for M&As it was 19 % (Ding, 2020). However, according to Anderson et al. (2017), foreign investors in China are more likely to exit with an M&A rather than an IPO compared to domestic investors. One interviewee said that “M&As are not that common in China, in some cases, it is much less frequent than an IPO”. Fan (2019) claims that IPOs are the most important exit type in China, judged on the exit return rate. In China, on average exiting through IPOs instead of M&A is 22% more profitable (Fan, 2019). Fan argues there are too few channels in

China to exit, pushing companies overseas. One reason for this is the historically undeveloped capital market in China. The author describes M&As in China as a “flexible” way to exit. However, other authors such as Lin (2017) argue that weak institutions for M&A processes in China lead to difficulties when doing due diligence processes and assistance from people with financial experience is needed, but the number of experts is few in the country which might hinder the due diligence process.

Something to note, which was pointed out by interviewees is the facilitation of business when keeping ties with the government in any capacity. This ought to apply to exits as well as especially with M&As, connections matter to get a good deal. VC companies are more dependent on the strength of institutions when exiting from their investments than public companies. Anderson et al. (2017) concludes that political ties in China are actually essential for successful exits both in the form of IPO and M&A (applies to mainland China). It does not matter whether the political connections are from the local or the central government.

Ease of doing an IPO in China

In regards to IPOs, interviewees said that they are hard to do in China. This is supported by Fan (2019) who describes IPOs in China as hard to do, expensive and take a lot of time. Interviews further suggest IPOs are easier to do in the US. For this reason one interviewee expressed that “going to Nasdaq is more common than going public in China”. Further, Lin (2017) brings up the difficulties with IPOs in China, commenting on some institutional obstacles on the stock market which holds back the progress of the VC industry. However, according to Fan, only 6.8 % of Chinese companies who did IPOs listed outside of China. Furthermore, KPMG (2021) suggests that more Chinese startups list in China rather than on Nasdaq. According to the author this can partly be explained by the introduction of GEM, the growth enterprise market in China. GEM allows companies to list on a board on the stock exchange in Hong Kong, even though the enterprises do not fulfil all requirements to list on the main board (Mayer Brown, 2017).

Since 2018 (until 2021), according to Crunchbase (n.d.), 109 Chinese companies have listed on Nasdaq and NYSE (New York Stock Exchange). According to CNBC (2021a), this trend is not ending anytime soon, as around 60 Chinese companies are currently preparing an IPO in the US during 2021. This is in spite of current frosty trade relations between the two countries. According to CNBC (2021a), there is also a trend of the large Chinese companies getting even larger and absorbing most of the investment. In turn, many Chinese companies enter the stock market overvalued and the stock price drops after some time.

As a foreign investor, there are some factors to keep in mind when considering IPOs in China, or with a Chinese startup abroad according to interviews. According to CNBC (2021b), China is willing to open up its financial market to international players increasingly in the future, but there are still rigorous regulations on how much money foreign investors can bring outside China, and therefore may oppose a hindrance when initiating exits. Interviews suggested that there have been quite strict rules regarding foreign ownership when listing a Chinese company

and that there have been incidents when the foreign investor has had to leave before the listing was approved. Furthermore, there is the issue of the domestic stock exchanges only accepting RMB funds, when most foreign investments in China go to USD funds. This is, however, according to Daxue Consulting (2020) a changing trend, as many foreign investors are now starting to consider RMB funds instead.

Maturity of the domestic stock markets in China

In 2020, IPO activity was high on Chinese stock exchanges. One reason for this could be the increase in tension between China and the US, prompting more Chinese startups to list in China rather than on Nasdaq (KPMG, 2021). According to KPMG (2020d), 2020 was the most active year for stock exchanges in mainland China and Hong Kong in ten years. The Shanghai Stock Exchange is judged by the volume of funds raised, the number three stock market in the world, and the Hong Kong Stock Exchange is number two after Nasdaq. KPMG (2020d) supports the interview's view of the Hong Kong Stock Exchange growing, stating that more international companies are listing there. According to interviews, this can be due to an increased focus on technology companies in Hong Kong from before focus on real estate and finance, which encourages startups.

5.2.5.2 Ease of doing exits in India

There are different reports about which way of exit is most common in India, IPO or M&A. The most common way of exiting differs between domestic and foreign VC companies according to Joshi and Chandrashekar (2018). One issue with M&A for foreign investors is that there are not very many large companies willing to buy startups, which affects the price. Many technology startups list on the domestic stock exchange. Due to this, the number of exits and the maturity of the domestic stock market were deemed beneficial for VGVC (light green). The ease of doing an M&A and the ease of doing an IPO were both deemed to be slightly beneficial (yellow), see Table 11.

Number of exits in India

In India, the exits have not taken off quite yet, and there have been quite some challenges for the VC funds according to interviews. One interviewee expressed that “India has not seen exits at the high level. Only a handful of them.” According to Statista (2021), the number of PE and VC exits have declined in recent years in India. The interviewees partly shared the same view. Some exits have gone through, but the exits have not reached huge numbers. In Figure 4 an overview of the number of exits between 2015-2018 is given. India had 186 exits in 2015 and 170 in 2018.

SIDBI (n.d.) argues that the decline of VC exits is partly due to that when compared to other more developed VC markets the startups in India take a long time to exit. This is primarily because of the regulatory challenges making growing and scaling up a costly process. Slow exits are problematic due to the fact that the limited partners need to wait an extra-long time to receive their money invested which decreases the trust.

However, interviewees were optimistic regarding the future of Indian exits. Until now, India has not had many large exits, but interviewees argued these will become more likely both through M&A and IPO in the future. According to a report by Bain & Company (2021), they expect the exit value to increase in the following one to two years as a result of the overall portfolio maturity in India which means it will be time to exit soon for many investors.

Ease of doing an M&A in India

Another reason why exits in India can be considered to lag behind is that there are not many M&As taking place, according to SIDBI (n.d.). In order for a successful M&A to occur, there needs to be corporations that are willing to buy the startups, and according to interviews, very few large corporations are open to buying startups. Another way for an M&A to happen is via an international investor, but these have shown weak interest in the Indian market, possibly because of the weak regulations and unbeneficial tax scheme. There is also the issue of restrictions for investments for countries with shared borders (Zinser, 2021) which affects international M&As. One interviewee described the M&A landscape in India as “raw” and that “exit from an M&A perspective is very rare, very few companies do this”.

This is somewhat contradicted by secondary sources that show that M&As are the most common ways to exit. According to Joshi and Chandrashekar (2018), foreign and domestic VCs exit in different ways in India. In 2018, foreign VC firms’ exits consisted of 68% M&As and 32% IPOs. Meanwhile, for domestic VC companies, the correlating numbers are 40% M&As and 14% IPOs, leaving 46% to other exit types. Overall, M&As were, according to Joshi and Chandrashekar (2018), the most common way to exit in India with 51%, compared to 21% IPOs. See Figure 5 for visualisation.

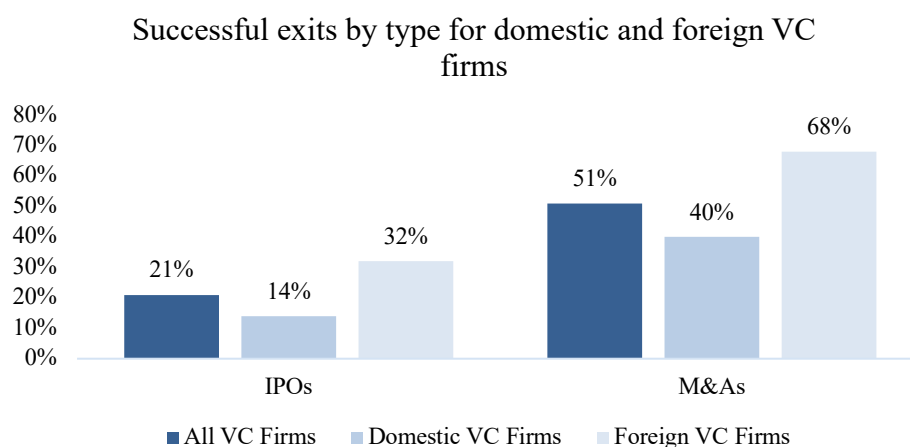


Figure 5. Joshi and Chandrashekar (2018). Successful exits by type for domestic and foreign VC firms in India

In addition, location seems to matter for how to do an exit in India, according to Joshi and Chandrashekar (2018). For example, for VC companies based in Bangalore, which, according to interviews, is India's innovation hub, 48% of exits were via M&A, and 17% via IPO. This can be compared to non-Bangalore based VC companies, where 21% of exits were made via M&A, and 23% with IPOs. Joshi and Chandrashekar (2018) mean that this showcases the central role of networks in M&As.

Ease of doing an IPO in India

According to the interviews, the conditions to list on the Indian stock exchange are quite strict. For example, the company needs to have been profitable for some time. However, compliance and the process when the listing is similar to other stock exchanges like Nasdaq. Interviewees suggested that most of the exits in India have been through an IPO, as illustrated by the quote below.

“In India, most of the exits have been along the lines of an IPO. It is very easy to grow here, and the kind of multiples you get in public markets are much higher. There are so many startups going public now, IPOs are getting common.”

This is however contradicted by Joshi and Chandrashekar (2018) who claim that IPOs are not the most common way to exit. According to Joshi and Chandrashekar (2018), 21% of all exits in India were IPOs, compared to 51% M&As, although the numbers differed somewhat whether the VC company was domestic or foreign, as well as Bangalore based or not.

Maturity of the domestic stock market in India

Something enabling IPOs in India is the high liquidity of the stock market. The Indian stock exchange is ranked number nine in the world in terms of the number of IPOs on the stock market (EY, 2021). According to EY, the capital markets overall in India show high activity and the Indian stock market is a good place for technology companies with scalable business models.

5.2.5.3 Ease of doing exits in Singapore

In Singapore, M&As are the most common way of exit according to interviews, but there might be an issue with valuation as there are not that many large companies willing to buy startups. There have not been many IPOs in Singapore, and very few listed on the domestic stock exchange as it is not very active. The regulations around exiting are however transparent. Many believe there will be an increase in exits in the next few years. Due to this, all criteria with the exception of the maturity of the domestic stock market (deemed to be slightly beneficial, yellow) were deemed to be beneficial for VGVC (light green), see Table 11.

Number of exits in Singapore

The number of exits in Singapore in 2018 was 131. This was an increase from 2015 when there were 75 exits, see Figure 4. According to Golden Gate Ventures and INSEAD (2019), the

number of exits is about to increase in Singapore and the rest of SEA. This is something many interviewees agreed on, that there will be an increase within 2-3 years. Interviewees argued that the exit market in Singapore has not yet reached the maturity as that in the West, and that there will be more exit opportunities in the future, based on more companies started and the ecosystem growing. Interviewees also suggested that there will be more mega exits, meaning large sum exits, in the future in the region.

Ease of doing an M&A in Singapore

According to interviews, M&A is the most common way to exit in Singapore. In general, the process and the ease of doing an M&A is similar to other countries. However, there is one issue, which is the issue of valuation for the startups. Interviewees claimed that there are some large companies in Singapore interested in buying startups, but there might not be that many, which leads to lower valuations. This is illustrated by the quote below.

“It's not more easy or hard to go through with it in Singapore compared to the rest of the world. The question is whether or not the value of the company is the same. You can always sell the company, but will you get the price you want?”

Ease of doing an IPO in Singapore

In 2020, Singapore had 11 IPOs and these raised 1.4 billion USD (PwC, n.d.). According to interviews, one reason why there are so few IPOs in Singapore is that the regulations for listing on the Singaporean stock exchange are quite strict. Furthermore, interviewees suggested that a connection with the government is usually needed to list in Singapore. Today, most companies listed there were either founded by or owned by the government. However, according to interviews, regulations around IPOs are straightforward and transparent, similar to most regulations in the country.

However, many interviewees had a favourable outlook on the future IPO landscape as they believed that the stock market will mature in the coming years and that we will see more exits via IPOs. Something brought up in the interviews was SPAC as an alternative for IPOs in Asia, due to the lesser requirement for this type of listing on the stock market. For example, Grab (a SEA ride-hailing app) was listed through a SPAC in 2021 on Nasdaq and there might be more to follow according to CNBC (2021c).

Maturity of the domestic stock market in Singapore

Despite Singapore being one of Asia's biggest financial hubs, the Singapore stock exchange has neither been performing well nor been seen as a good place for companies to list (Bloomberg, 2019b). Interviewees emphasised that in terms of valuation, the Singaporean stock exchange is not the best option. According to Bloomberg and interviews, many Singaporean companies instead choose to list in Hong Kong or on Nasdaq. One interviewee claimed that most SEA technology companies list on Nasdaq. The Singapore Stock Exchange has also witnessed net delisting meaning that the number of enterprises leaving the stock

exchange has outnumbered the listings. One interviewee said that “the Singapore stock exchange is a sleepy and slow exchange.”

6. Analysis

In the analysis chapter, the selection of three countries among China, India, Japan, Singapore, South Korea and Taiwan, and a more detailed look at the selected three countries China, India and Singapore, will be examined separately. Furthermore, a closer motivation behind the final selection of Singapore will be discussed.

6.1 Phase 1: Why China, India and Singapore were selected before Japan, South Korea and Taiwan

The focus in phase 1 was to explore which of the six countries of China, India, Japan, Singapore, South Korea and Taiwan qualified as the most suitable countries for Volvo Group to initiate their investment work in Asia. After examining the two identified themes of a well-developed startup landscape within Volvo Group Venture Capital's scope, and a strong VC market, China, India and Singapore were selected for phase 2. The scoring of the countries according to the two themes can be viewed in Figure 6, where Singapore received the highest score followed by China and India.

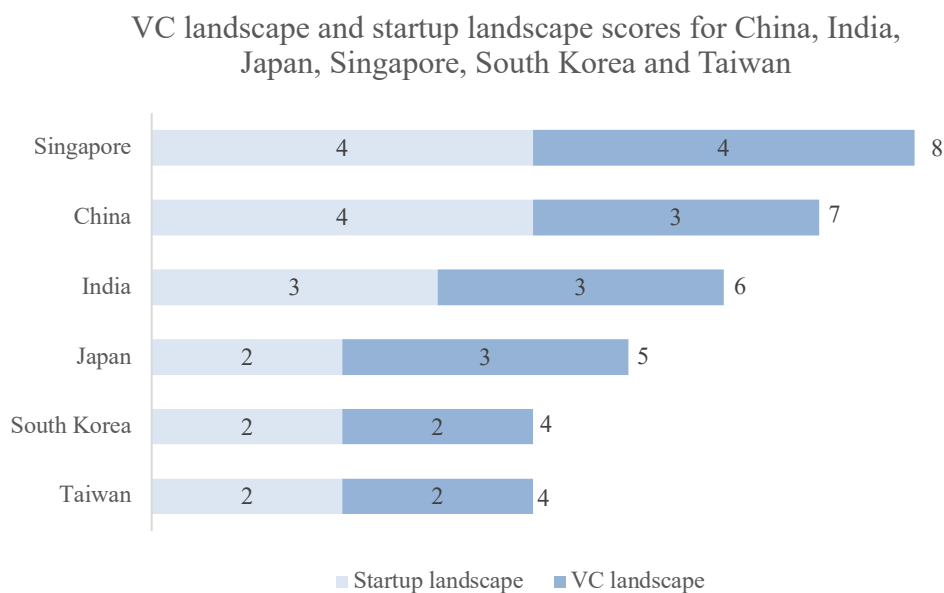


Figure 6. Visualisation of the scoring of the startup landscape and VC landscape for phase 1 for China, India, Japan, Singapore, South Korea and Taiwan

6.1.1 Japan

The startup landscape in Japan was deemed not beneficial enough for Volvo Group to enter. One explanation for this is that most innovation activities are primarily carried out by large corporations and focused on areas outside of Volvo Group's scope. Interviewed experts confirm this view: they are not perceiving the business environment in Japan as good for startups, and furthermore, the stability of employment in large firms deter from self-

employment which empties the startup world of talent. Also, the demand for risk capital in Japan is low due to a capital system centred around banks.

Further, Japan's VC market lags behind equivalent countries suggesting that the market is not mature enough. The volume of foreign direct investment floating in Japan is small, which might be a result of the tendency of doing business locally rather than globally. This is also illustrated with few international VCs on the Japanese market. Additionally, the cultural and linguistic barriers were also deemed high in Japan, which might complicate the due diligence and contractual progress with high technological startups.

For Japan to become a more attractive country for Volvo Group to invest in, more startups need to evolve in Volvo's focus areas and a shift from corporate innovation to startup innovation is necessary. One measure to help this could be improved regulations for startups, as they currently rather promote large corporations. Furthermore, The VC market in Japan also needs to develop and become more internationalised in order to be more attractive to VGVC.

6.1.2 South Korea

There were few mentions of South Korea in the study, both in the secondary data collection and the interviews. In fact, only one interviewee mentioned South Korea in the context of South Korea having some similar traits to Japan regarding innovation and venture capital. In South Korea as well as Japan, innovation activities are primarily carried out by large corporations, and most innovation occurs outside of Volvo Group's scope.

Furthermore, the South Korean venture capital market is not as open and foreign-friendly as it needs to be in order for it to be considered an attractive market for an international VC. The policies by the government to support VC companies, only support domestic VC companies. The VC market is also the fourth smallest of the six countries studied, only larger than Japan and Taiwan. Finally, the mega-conglomerates are also something that needs to be taken into consideration when looking into investments in South Korea as a foreigner.

If South Korea managed to shift innovation more towards startups, and promote self-employment the country would be of larger interest to VGVC. South Korea is considered a very innovative country overall and has brought good innovation globally, but the VC market still has to develop, and the government needs to promote foreign investments more.

6.1.3 Taiwan

Taiwan was also not selected for phase two, as the VC landscape and startup landscapes were deemed not favourable enough in comparison to the other five countries in the study. One reason why the startup market scored so low was that most innovation is outside of Volvo Group's scope. Further, similar to South Korea and Japan, Taiwan is showing tendencies of innovation occurring in large corporations rather than startups.

Regarding the VC market, it is the smallest out of the six countries studied, several times smaller than the second smallest which is Japan. This could be because the government is not sufficiently promoting investments. Another issue with the Taiwanese VC market is that it is not internationalised enough. Very few foreign VCs have a presence in Taiwan. In order for Taiwan to be of interest for VGVC at this point, there would need to be more startup activity within Volvo Group's areas of interest. Also, the government needs to increase its promotion of investments and foreign VC companies.

In summary, Japan, South Korea and Taiwan were ruled out on the basis of underdeveloped VC markets and a lack of startup activity within VGVC's area of interest and were not selected for phase 2.

6.2 Phase 2: Which country out of China, India and Singapore has the most suitable VC-market for a western CVC?

In this analysis chapter, further findings for the three countries that were selected in phase 1, China India and Singapore, were compared on the five themes that were constructed: business climate, startup landscape, VC landscape, fund collaboration opportunities and ease of doing exits. When all the countries' scores from the result were added up, Singapore received the most points followed by China and India. Figure 7 provides an overview of the scoring for each theme for the three countries.

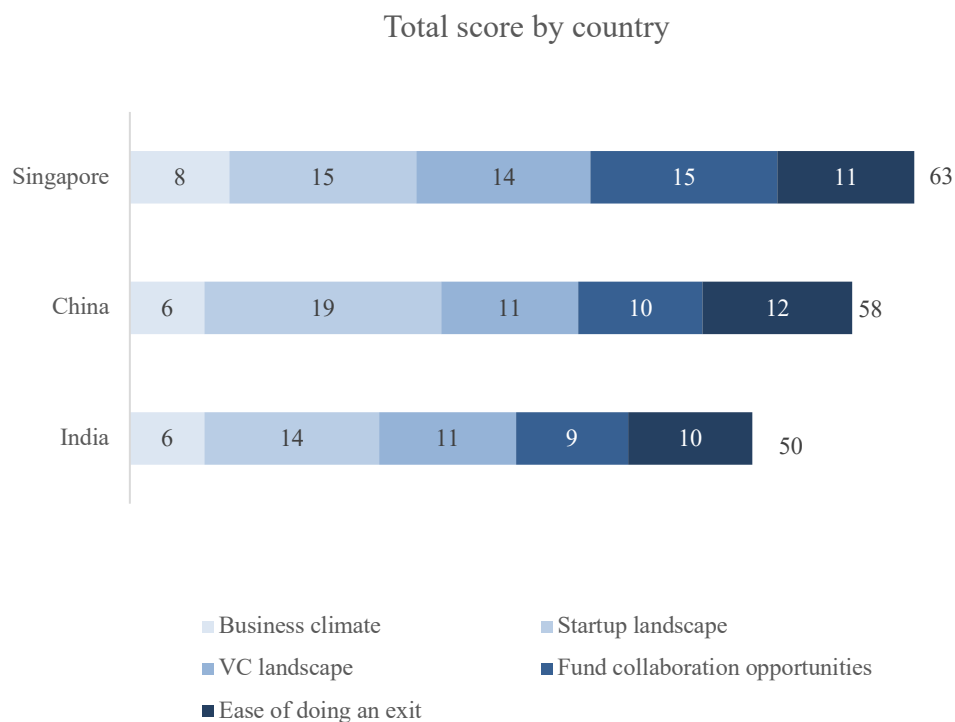


Figure 7. Visualisation of the total scoring for China, India and Singapore across all themes

6.2.1 Business climate and technological trajectory of the country

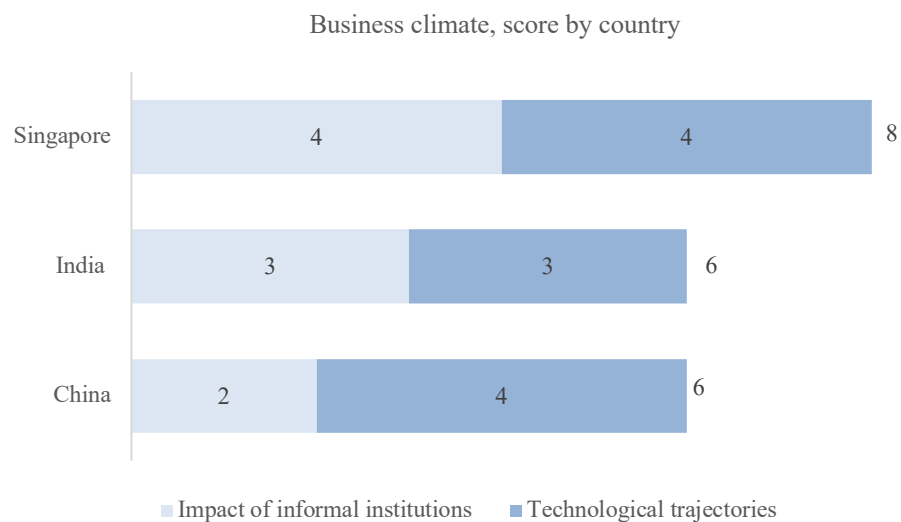


Figure 8. Visualisation of the scoring for the business climate in China, India and Singapore

In Figure 8 the total points for the theme business climate and the criteria are visualised. According to the result, Singapore's business climate was shown to be most prominent while the business climates of India and China were equally good.

China, India and Singapore all have different histories, resulting in different cultures and traditions. Evidently, this has had a large impact on the country's respective institutions, both formal institutions such as laws and regulations, and informal institutions such as norms and ways of doing things. For this theme, the impact of informal institutions and the technology trajectory of the country were studied. In regards to informal institutions, the study shows that Singapore's informal institutions are the most similar to the West, while China's informal institutions are the least similar to the West, with India's informal institutions in between. The impact of this is that the more similar informal institutions are, the easier it is to interact and create links between cultures. Too significant differences mean that it is hard to understand each other, and it may even be hard to understand what is the right procedure, or right way of acting. Hence, judging on this factor, Singapore would be the easiest country for Volvo Group Venture Capital to do business with.

Looking at the factor of technological trajectory, China and Singapore share the highest mark, with India second best. With China being a technology leader and the government pushing forward for multiple technologies including the full supply chain of electric vehicles and AI, China decidedly has an interesting technology trajectory. Singapore meanwhile is a global innovation hub with the government investing a lot in R&D and innovation. Technological ambition from the government gives an indication to the future of startups and new technology arising from innovation activities in a country, and Singapore's and China's directions are

therefore positive for future investment from VGVC. India is developing quickly but technology and the competitiveness has not yet reached the levels of China and Singapore yet.

6.2.2 Startup landscape

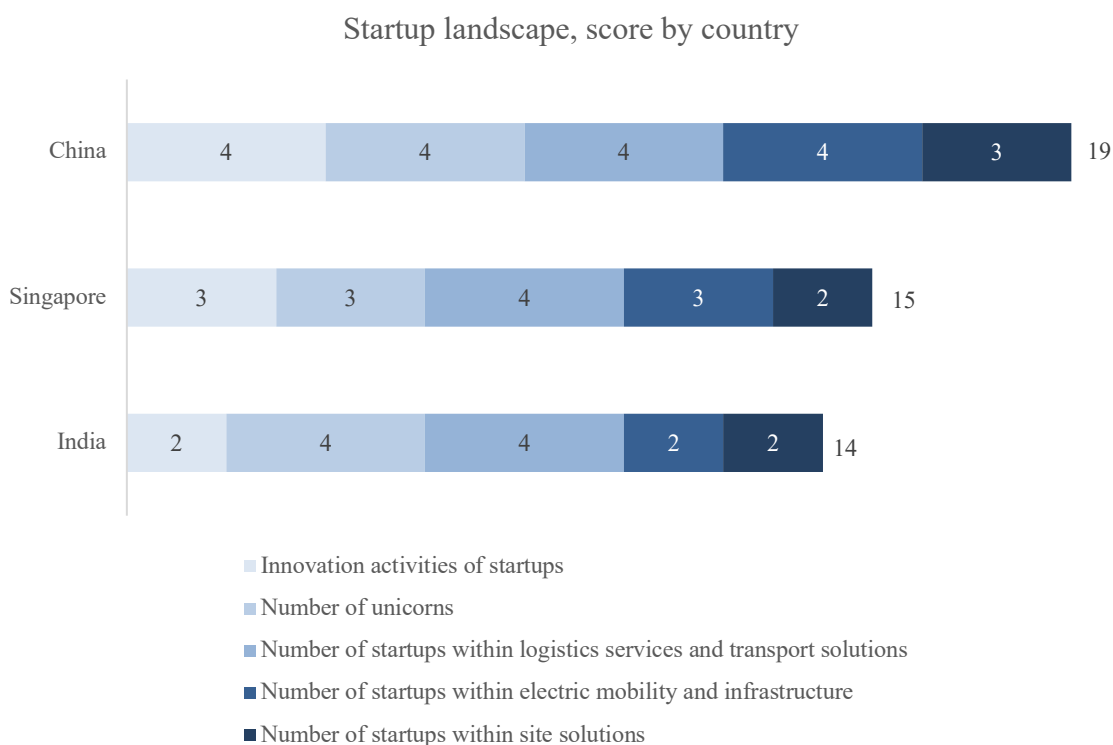


Figure 9. Visualisation of the scoring for the startup landscape in China, India and Singapore

In total, China gained the largest number of points in the startup landscape, followed by Singapore, and then India. See Figure 9 for an overview of the overall scoring for the startup landscape and all the underlying criteria for the three countries.

China, India and Singapore have all experienced developing maturity in Volvo Group Venture Capital's focus areas, and high growth in the number of startups. China has had the strongest development thus far out of the three, which could be connected to the push for innovation and creation of innovation capabilities from the government. However, Singapore is not too far behind China, the country has done a lot to promote the country as an innovative hub and lowered the barriers for startups to operate. It is important to consider that Singapore's startup landscape is not isolated to the national borders of Singapore, many startups that operate in other SEA countries have their headquarters in Singapore or some other type of linkage to the country. Therefore, Singapore enables access to a larger startup landscape than countries operating solely within the borders.

India is somewhat falling behind the two other countries, with a ranking of 48 on the Global Innovation Index for 2020 (WIPO, 2020) (China is number 14 (Hong Kong is number 11) and

Singapore number 8), but somewhat contradictory because India has one of the biggest markets in the world for startups. What this means to Volvo is that there are probably some interesting companies for Volvo in India, but there is a risk that they will fail because of a lack of innovativeness or maturity.

For the number of startups within logistics services and transport solutions, all three countries performed strongly on the assessment and consequently received the highest grade. Out of the three countries, China ultimately came out the strongest due to the large number of startups produced and the continuing major trend in that area (KPMG, 2021). The SEA region has also seen a rise in logistics technology in recent years and is getting more attention globally (Deloitte, 2019b). Logistics is a large market in India as well, but one difference is that a lot of the logistics activity in India is connected to developing the Indian unfinished infrastructure. This could be of good use for Volvo Group, especially because a thing noticed in the interviews is that countries in Asia seem to prefer local innovations, and could therefore help in Volvo's ambition to establish themselves in Asia.

Regarding the number of startups within electric mobility and infrastructure, China received the highest mark due to having a lot of innovation activities in the areas and the government pushing for automotive electrification. China was the only country where it was noticeable that the country was pushing for full electrification, whereas for example in India, the work within electric vehicles (EV) is ongoing, but mainly for smaller vehicles. China is pushing for EV in their public transport, which is of interest for Volvo while in India most innovation takes place in the two-wheeler segment such as scooters and motorcycles due to the Indian infrastructure not being developed enough to use larger electric vehicles, why India received a lower score. Singapore received the highest score. The Singaporean government are promoting electrification, but the development is not happening as quickly as in China. Innovation in SEA is local, and there is a push for local production and innovation regarding electric vehicles in large countries such as Indonesia which could provide an opportunity for VGVC.

Site solutions overall has been the focus area with least activity in all three countries. Similar to the other focus areas, China came out the strongest as, according to Business Sweden (2021), there are some companies of interest for VGVC in this focus area. India and Singapore were both rated lower and were deemed "slightly beneficial" due to less innovation happening within site solutions.

6.2.3 VC landscape

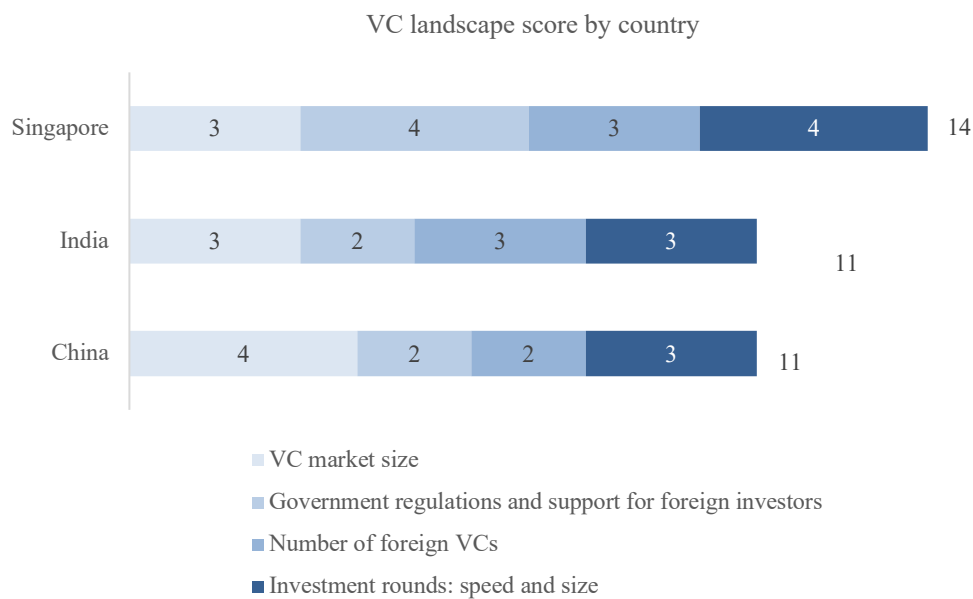


Figure 10. Overview of the scoring for the VC landscape in China, India and Singapore

In the entire theme of the VC landscape, Singapore places first with the best marks on all themes except VC market size, where China is ahead. In Figure 10 an overview of the scores for the VC landscape and the criteria for China, India and Singapore is given.

The Chinese VC market is currently the second largest VC market in the world, after the US, where the VC industry originated. India's VC market sizes between China and Singapore, but there are not as many international investors yet, and their domestic investors are not filling the void. A larger market size indicates more possible deals, with more opportunities for VGVC provided that VGVC's areas of interest are represented, which is why the Chinese VC market is deemed most attractive for this factor.

Some say that Singapore has overtaken the role of the financial centre in Asia, and this shows in the generous and liberal regulations for foreign investors. In India and China, the government is to some degree encouraging foreign investments, however the regulations are sometimes hard to predict and are not always followed due to for example local variations or the need for political ties. For obvious reasons, this criterion is one of the more important ones. The VC industry is in the end a financial business, and regulations can largely change where it is profitable to be active. Encouraging regulations and governments actively looking to attract foreign investors can make a large difference in the attractiveness of countries.

In percent, the amount of foreign investment is much larger in India than in China. Around 80% of all investments in India originated abroad compared to 30% of all investments in China. However, this is not a reliable indicator for the number of active foreign VCs. In Singapore, the percentage of foreign investment is somewhere around 75-90 %. According to interviews, foreign investors usually account for 50% of the deals in later stages, while for earlier stages, Singaporean VCs dominate. The number of foreign funds could indicate the ease of finding

collaboration partners, should VGVC wish to invest in a foreign fund that might bear a larger resemblance to the type of collaboration done in the West.

Regarding the speed and size of investment rounds, China and India stand out as much faster and larger than rounds usually are in the West. This has implications for the way a VC can conduct business, the speed at which the due diligence needs to happen. One interviewee raised the issue of being forced to make too quick decisions.

“Any entrepreneur who raises capital needs to make decisions slowly. A lot of people in China make this decision too quickly. It’s like getting married to someone you barely know.”

Meanwhile, the round size and speed of raising in Singapore are more similar to the West. This might facilitate for western VCs as they can use their ways of conducting business without too large deviations.

6.2.4 Fund collaboration opportunities

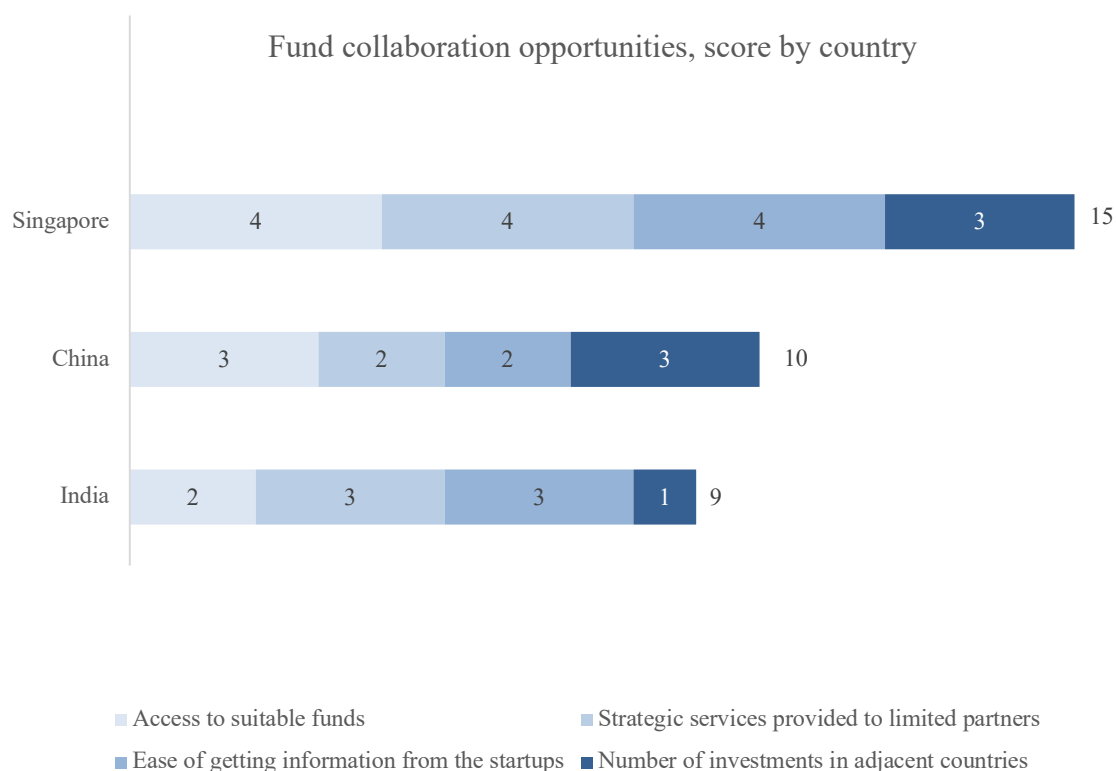


Figure 11. Overview of the scoring for the startup landscape in China, India and Singapore

On the theme of fund collaboration opportunities, Singapore again stands out as the most suitable choice with the highest mark possible on three out of four factors. In Figure 11 a visualisation of the scores for fund collaboration opportunities for China, India and Singapore is given.

In regard to access to suitable funds, Singapore gained the highest mark due to a large international presence and a large overall focus on strategic funds. Many of the international VCs active in Asia that have come up in this study for one or another reason have had offices in Singapore. Singapore as a major international financial hub with an interesting VC market attracts most VCs looking to Asia. Also, the domestic VC industry is thriving, standing out mostly during the early-stage rounds. For this reason, there would be many suitable collaboration partners in Singapore. This would make an establishment in Singapore easier for VGVC, and increase the chance that some of these funds might have a stronger focus on VGVC's focus areas.

An issue with the funds in China for a corporate investor such as VGVC is that the funds usually have a strong financial focus and less of a strategic focus. That would make it difficult to align the interests of the fund and VGVC fully, as a major reason why VGVC are doing investments in startups is the strategic aspect. On the other hand, China has a lot of interesting technology for VGVC and on the basis of the size of the VC market, there ought to be a number of funds with VGVC's focus areas. Also, some of the major international actors do have a presence in China, and those funds would largely be more strategically focused than local Chinese funds.

Regarding India, there seems to be a demand for international investors, and willingness amongst VC companies at least seems to be high for collaboration with international limited partners. One reason for this could be the strategic value the international investor could bring to the collaboration regarding expanding overseas. Also, there are not a lot of domestic Indian VC companies, thus increasing demand for international investors as the VC market grows. One main reason found why international LPs would be hesitant to start investing in India are the continuous changes in investment policies and regulations, for example recently the increased severity in regulations for investment from neighbouring countries like China. Instability in institutions will make investments riskier and might be a reason why international investors avoid some markets.

For the strategic services provided to limited partners, China scores pretty low as described above for the reason that their funds are typically only financially focused, however with some exceptions, especially international funds. In Singapore, which scores the highest, it is standard that the fund provides additional services, most commonly the co-investment opportunities, but also flexibility in setting up the fund beforehand. Also, some funds offer networking opportunities or other events catered to connect startups with corporate investors. In general, in India, there has not been much of a strategic focus within funds, but according to interviews this is changing quickly, and investors are more and more active in the funds nowadays. One increasingly common strategic aspect in India is the co-investment opportunity.

Regarding the theme "ease of getting information from startups", Singapore again is deemed the best option for VGVC. The possibility of getting information from startups is essential to a

fruitful collaboration where the exchange of information and knowledge determines how much the two companies can gain from each other. This is an important factor in corporate venture capital investments as the two parties seek to both help each other. For that reason, if it is difficult for startups to exchange information for example due to institutions such as laws or norms, this will make corporate investments less successful.

The interviews indicate there is usually never any trouble for the founders to share information in Singapore, with the obvious exception of very sensitive information like confidential data. One reason why startups are so open to sharing information could be the strong IP protection legislation in Singapore, protecting the startups and their business, which in turn creates a safe and strong investment scene. In India, the general conception is that startups are quite happy to share information, however, this is contradicted by some research stating a mistrust between startups and investors. Due to the mixed information on this point, it is difficult to properly judge this factor for India. In China, in general, startups seem to keep more to themselves. Some express that IP is impossible to ever get a hold of, and the Chinese government drives a strong campaign to internalise any IP.

For the last factor of reachability into other countries, China and Singapore score the same point. As VGVC has no presence in Asia at the moment, it would be favourable if, from the region they start investing, it would be easy to also reach other regions, that way receive a broader ground to source deals from and make use of different strengths of different regions. Therefore, the more tendencies were seen in countries to also invest overseas, the better.

From Singapore, a lot of investments are being made into the rest of SEA, namely interesting markets such as Indonesia and Vietnam. Furthermore, Singapore can be said to be a natural hub between India, SEA and China, as the flight time is not long to either place. There are a lot of investments being made from Singapore to India, however at the moment, not many to China in the same way. China on the other hand is a major investor overseas. Up until recently, a lot of Chinese investments were made into India, but that focus may now shift to the SEA. Regarding India lastly, not a lot of investments are being made overseas as the focus is usually domestic.

6.2.5 Ease of doing exits

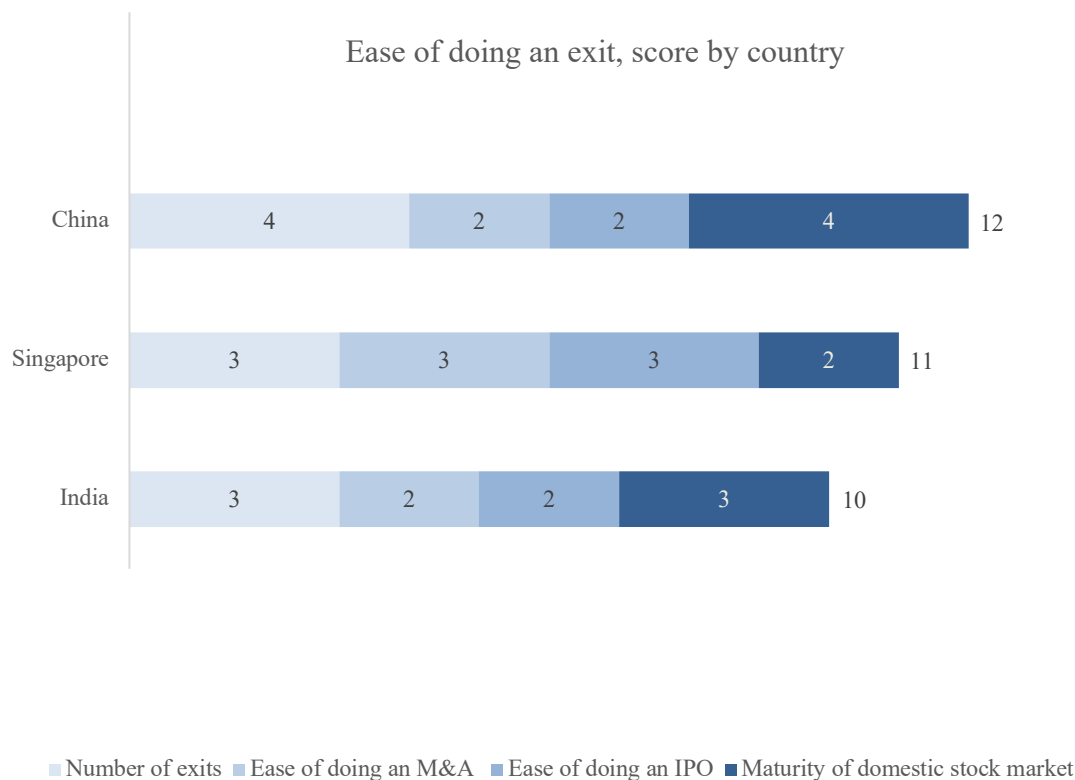


Figure 12. Overview of the scoring for the startup landscape in China, India and Singapore

Seeing as exits are such an essential factor to venture capital investments, should an otherwise interesting region not have good opportunities for exits, this would make this region unattractive for VC companies. Overall, as the VC market is newer in Asia than in the West, the opportunities for exits are also in development and not as plentiful as in the West. In general, on this theme, China is deemed the best option pointwise. However, in this case, the ease of doing an M&A and the ease of doing an IPO might carry more importance than number of exits and maturity of the stock exchange, why Singapore could be equally favourable for VGVC as China in this theme. In Figure 12, a visualisation of the scoring for ease of doing an exit is given for China, India and Singapore.

Regarding the number of exits, China has had the most out of the three countries and therefore scores the highest. The number of exits could indicate a more mature exit market and that it is easy to do an exit. It is also a good indicator how exits work in the country. Neither of the three markets have a mature exit market yet, but China has had the most exits followed by India and then Singapore. This means Volvo Group Venture Capital can get a better idea how exits turn out in general in China, than the other two countries.

As for the ease of doing an M&A, Singapore scores the highest, but not the maximum score. The reason for this is the transparent and relatively easy regulations regarding M&As in

Singapore. The issue with doing an M&A in Singapore is the valuation of the company. Due to the lack of large corporations interested in buying startups, the value of the M&A risk being lower in Singapore than in the West for example. This issue is the same in India, however there, regulations are more complicated and can be difficult for foreign investors to understand, which makes M&As less attractive in India than in China. Similarly, in China, regulations can be difficult, yet there are usually large corporations willing to buy which increases the potential value. However, something that needs to be considered both for M&As and IPOs in China, is the need for political ties in order for a successful exit. This shows a need for understanding of the informal ways to do business and would be difficult for foreigners to follow without local help or local collaboration partners.

Similar to M&As, IPOs are also deemed the easiest to do in Singapore. This again is due to regulations that are easy to follow and streamlined. Another reason for the higher score is the rise of SPACs which facilitates listing a company. On the other hand, regulations to list on the domestic stock markets are quite strict, which is also the case in China and India. In China, additionally, there are some restrictions around foreign investors and foreign currencies when listing which could limit VGVC's opportunities for exits there. In India, it is a lot more common for foreign VCs to do IPOs than domestic VC which could indicate it is also easier for foreign VC companies to do IPOs in India.

Finally, regarding stock exchanges, China has the most active ones, second only to the US. India scores the second highest point as their stock exchange is active and favourable to technology companies, and a lot of local companies list there. Singapore scores the lowest as their stock exchange shows low activity, and it is not popular for local companies to list there.

6.3 Why the Singaporean VC market is especially well suited for foreign CVCs, before the Chinese and Indian VC market

Venture capital is a risky business, and to start investing somewhere new, less a new continent can be considered very risky. On one hand, if there is no risk, there is no reward and the objective for venture investing is not to simply get an average return, but to find extraordinary businesses, even the elusive unicorn. On the other hand, for a business that is already so risky, there is a point in trying to minimise the risk around the core business, where it is possible. Of the three countries studied on a deeper level: China, India and Singapore, Singapore is the more developed market. The institutions in Singapore are stable and predictable, and there have been no changes back and forth, instead just further regulations promoting foreign investments. For Singapore, everything in the study pointed in one direction, while for India and China there have been some conflicting opinions. In the end, China and India are still emerging economies, and hence, the institutions will by default be less predictable than those in Singapore.

Investing in Singapore can happen in a stable environment, while still having a significant startup market and vibrant technology landscape. There are no issues with forbidden sectors and IP rights are solid, creating a good market both for investors and innovations. A foreign

CVC in the automotive industry will have access to one of the top financial and innovation hubs in the world, with a wide selection of technologies for the interest areas. There is also a tight geographic connection to major emerging markets such as Indonesia, Malaysia and the Philippines, while the local market certainly is smaller than both China and India.

This is a significant thing to consider, the smaller domestic market of Singapore than those of China and India. Due to this difference in market size, investing in Singapore foremost could mean missing out on one of the largest startup markets in the world fostered in the country of world technology leader China. However, we deem that Singapore is not far behind on technology development, and the benefits of the stable institutions, in this case, outweighs the smaller startup market. Also, the close relationship of Singapore to the rest of SEA which contains significant markets means the market is partly way larger than just Singapore itself. It needs to be remembered that this is an initial step, for further steps it is obvious that China is of great interest and could be considered a natural second step once the foreign CVC gets established in Singapore. Once familiar with a high context culture, the step to the next one is smaller. Furthermore, there are many VCs active both in SEA and China, meaning the network created in SEA might help with further expansion to China.

7. Conclusion

To conclude, the result of the study's implication for management, the suggested practical approach for a western CVC should they decide to start investing in Asia is considered. Also, the study's contribution to research and the implication of the study on future research is discussed.

Implications for management: An action plan for a western CVC in the automotive industry to start investing in Asia

The study shows that the most suitable country for a western CVC to start investing in Asia is Singapore, on the basis of a good startup ecosystem, favourable regulations for foreign investors, a vibrant venture capital market with many collaboration opportunities and good exit opportunities. A good first step for a western CVC to initiate investments in Asia is with a well-established international fund in Singapore. There are many reasons why this approach is suggested. First, a fund investment is a small step with considerably less risk than a direct investment. With a fund investment, the fund manager will take most of the risk, producing the portfolio. This approach will allow the CVC to learn about the market from the inside, without a huge initial risk, to in later steps be able to do more direct investments should they wish to.

Secondly, seeing that Singapore's and Asia's VC markets overall are quite new compared to the West, an international VC that started out in a more established market in the West is the only option to collaborate with a VC that has been active for a long time. Having been active for a long time is crucial to evaluate the fund managing skills of the VC. Also, an international VC will more likely facilitate the collaboration through the fund. Seeing that most of the collaboration within a fund for the LP is with the fund manager, this relationship is important for the LPs interaction with the startups as well. With international VCs having had experience themselves with other western companies and ways of doing things, it can be assumed that this dynamic and similarity between the VCs will enable collaboration in a good way.

Implications for future research

The aim of this study was to explore whether theories around innovation systems in general and national innovation systems, in particular, were lacking an important factor in venture capital. Research indicated that there might be a direct link between the state of a country's venture capital market and the same country's competitiveness, as national competitiveness depends on continuous innovation, and a healthy venture capital market supports innovation. In order to study this, a case study was performed looking simultaneously at the venture capital market as a whole, and the automotive sector in particular in selected countries in Asia: China, India, Japan, Singapore, South Korea and Taiwan. All these countries are competitive, springing from continuous innovation, however in somewhat different ways. Of the three,

China, India and Singapore, which were chosen for phase 2 of the case study due to their healthy VC markets, their competitiveness seemingly sprung from their vibrant startup landscapes.

In these countries a lot of the innovation is driven by startup activity, seeing as they are among the topmost active startup landscapes worldwide. These startups are readily financially driven by VC investments, and also strategically guided and operationally supported by the same investors. On the basis of the result of the study, no clear conclusion can be drawn regarding the nature of institutions that enable venture capital. Two of the largest VC markets globally are found in the emerging countries China and India. Despite the government's support of venture capital in many ways, this could indicate that stable institutions are not necessarily a need for a strong VC market, seeing as institutions by default are not stable in emerging economies.

On the other hand, due to the reciprocal relationship between a healthy VC market and a vibrant startup landscape, it would seem that one enables the other, and a country with the one should also have the other. Hence, in the case a country's innovation is largely performed by startups rather than corporations, the conclusion from the evidence of this study could be drawn that that country would also have a healthy VC market. A strong VC market will support, enable and push startups to innovate and thrive. This will, according to Michael E Porter, have a direct effect on the country's competitiveness. Consequently, this study partly supports the hypothesis that the frameworks around innovation systems are lacking an important factor because while it is indeed missing venture capital markets, this mainly is of importance when innovation is driven by startups rather than large corporations.

The conclusion of this study can be expressed as if a country's innovation is largely driven by startups, venture capital is an important factor and should be considered in the Diamond Model and other theories around innovation systems. If not, then other financial and strategic support systems similar to the function VC companies perform for startups should likely be considered in place of the VC market. A strong VC market is likely important for a vibrant startup market and hence by extension for national competitiveness, however, it can't be concluded from this study how important a strong VC market is for national competitiveness, seeing that there are other sources of innovation than startups.

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Appendix A – Interview templates

Below a selection of the interview templates used are shown. As the interviews were semi structured, the questions were tweaked according to interview situation and the interviewee's expertise.

Interview template for general investment experts Asia

- Can you describe what kind of contacts you have had with the venture capital industry?
 - Which countries or regions are you familiar with?
 - Could you tell us a little about the culture in these regions? Are there things in particular that affect how to do business?
 - Any regulations/laws that you need to be aware of when investing?
- (Startup scene) Which trends can be observed in these regions, when it comes to which companies to invest in?
 - Any trends aligned with Volvo Group's focus areas: transportation and mobility and more specific logistics, site solutions or electrification?
 - Are you familiar with how local start-ups see foreign investors, is it considered good or bad to receive investing from such?
- (Investors) What are the risks of being a foreign investor in these regions?
 - Are there significant differences between countries?
 - If you would recommend a country to start investing in, which would it be?
 - How would you do it?
 - Do you need to be on-site when doing investments, e.g. through an agency?
 - Do you believe it is harder to invest in these regions as a corporate venture capital company(due to the strategic reason for investing)?
- Is investing in Asia important for international VC/CVC? Why/why not?
 - Is it because of the strategic importance i.e. newer technologies are developed in Asia compared to the rest of the world or more of a financial reason i.e. it's cheaper or less risky?
- Lastly, what would be your final advice to a foreign investor seeking to start investing in Asia?

Interview template for international VC/CVC in Asia

- Which countries or regions are you familiar with?
 - Could you tell us a little about the culture in these regions? Are there things in particular that affect how to do business?
 - Any regulations/laws that you need to be aware of when investing?
- Can you tell us about your decision to start investing in Asia, what made you look into the Asian market?
 - Which countries are you investing in and why?
 - What kind of benefits have you gained from investing in Asia?
 - Financial? Strategical?
 - What are the biggest differences with investing in an Asian start-up?
 - Is there a difference between countries in Asia?
 - When you decided to start investing in Asia, how did you do it?
 - Did you start in a particular country/area?
 - Did you collaborate with companies already in Asia?
 - Did you establish an office in Asia or do you do everything from abroad?
 - How did the steps look like from an idea to start investing in Asia to execution?
 - Did you invest in Asia from the beginning or was it initiated later on, if later: why in that particular time frame?
- (Startup scene) Which trends can be observed in these regions, when it comes to which companies to invest in?
 - Have you invested anything in areas such as transportation and mobility and more specific logistics, site solutions or electrification?
 - Do you see any trends aligned with Volvo Group's focus areas: transportation and mobility and more specific logistics, site solutions or electrification?
 - What are your experiences with how local start-ups see foreign investors, is it considered good or bad to receive investing from such?
 - What are the differences between the start-up scenes in different Asian countries?
- (Investors) What are the risks of being a foreign investor in these regions?
 - Are there significant differences between countries?
 - How do you decide between risk and reward when it comes to investing in different countries?
 - If you would recommend a country to start investing in, which would it be?
 - How would you do it?
 - Do you need to be on-site when doing investments, e.g. through an agency or a local office?
 - Do you believe it is harder to invest in these regions as a corporate venture capital companies (due to the strategic reason for investing)?
- Is investing in Asia important for an international VC/CVC? Why/why not?
- If you were to start over with investment work in Asia, what would you do differently this time? Any specific learnings you want to share with us?
- Lastly, what would be your final advice to a foreign investor seeking to start investing in Asia?

Interview template for fund collaboration, government VC promotion, exit landscape

- How does a typical collaboration between a fund and a VC look in Singapore?
 - How easy is it to establish a collaboration with a VC firm/fund?
 - What kind of focus is typical for funds in Singapore? i.e., a purely financial focus or a strategic focus?
 - How does the collaboration typically look?
 - What kind of role does the LP get in the fund? Passive, active?
 - How close to the startups can the LP get?
 - What information exchange is possible?
 - Do funds here typically also invest in other countries? If so, which?
 - Are there typically many international investors in these funds?
 - Is there any difference between investing in the fund as a domestic or international VC?
- Has country x seen a rise in international VC investors the last 5 years?
 - Does the government support the VC-industry somehow?
 - Does the government promote foreign investors?
 - How does the typical investment round work in Singapore? Does the speed/size differ from other countries?
- Volvo Group's three focus areas are logistics services and transportation (transport as a service, increase transport efficiency, network orchestration. I.e. real time navigation maximise utilization and efficiency, supply chain efficiency.), electric mobility (the whole supply chain, i.e. battery efficiency) and site solutions (optimize and orchestrate site efficiency and safety at, for example, ports, mines. For example robotics, remote control. Construction supply chain.). Are you familiar with the development of these in Singapore?
- How does a typical VC exit work in Singapore?
 - Does it differ from other countries?
 - IPO's vs M&A vs SPAC which is most popular?
 - How easy is it to go through with an IPO?
 - How mature is the stock exchange?
 - How easy is it to go through with a merger or acquisition?

Appendix B – VC market sizes and number of exits

VC market size (billion USD)	2013	2014	2015	2016	2017	2018	2019	2020
China	4,8	17,6	44,6	65,4	71,8	106,7	45	56,5
India	2,9	4,6	6,3	4,8	4,7	6,6	11,1	10
Singapore	0,834	1,071	1,164	1,497	2,007	4,673	6,886	
Number of exits	2013	2014	2015	2016	2017	2018	2019	2020
China	123	444	1813	2001	1420	1050		
India			186	123	116	170	116	73
Singapore	85	82	75	145	163	131		

Sources for data:

Preqin, 2019; Bain & Company, 2021; KPMG, 2021; KPMG, 2020a; KPMG, 2020b; KPMG, 2020c; Vertex, 2021, Golden Gates Ventures & INSEAD, 2019



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